

THE OPEN UNIVERSITY

A HISTORY

DANIEL WEINBREN

THE OPEN UNIVERSITY

A HISTORY

This analysis of The Open University's precedents, personalities, politics and pedagogies contextualises learners' experiences and illuminates the change in the values of our society, our ideas about learning and our use of a variety of media.

In April 1963, Labour Party leader Harold Wilson sketched a proposal for a University of the Air. He launched the idea that autumn and in April 1969 The Open University was granted a Royal Charter. Aiming to be inclusive and open to people, places, methods and ideas, it has supported the learning of millions. Despite hostility from politicians of the left and right and from some within the BBC, the civil service, the academy and the press, it has won a permanent place in the affections of the nation.

The Open University has continually produced relevant, successful innovations in teaching, technology, student guidance and ideas about learning for a wide variety of adults, including those without A-levels and those with disabilities, in prison, in the Services and with full-time jobs. Its supported, open learning strategies have enabled living rooms to become laboratories, telephones to be used for tutorials and the internet for collaborative learning.

Now the clear leader in part-time provision it is subject to the same constraints and opportunities as other universities operating within an increasingly globalised marketplace. This account of The Open University's development sheds light on wider social and political developments, and on the history of learning by adults. It reveals how this single institution has transformed the notion of the university, within Britain and across the globe.

Daniel Weinbren is a Fellow in History at The Open University

Cover: Robin Wilson presenting an OU lecture in the 1970s © The Open University

MANCHESTER
1824

Manchester University Press



The Open
University

ISBN 978-0-7190-9627-3



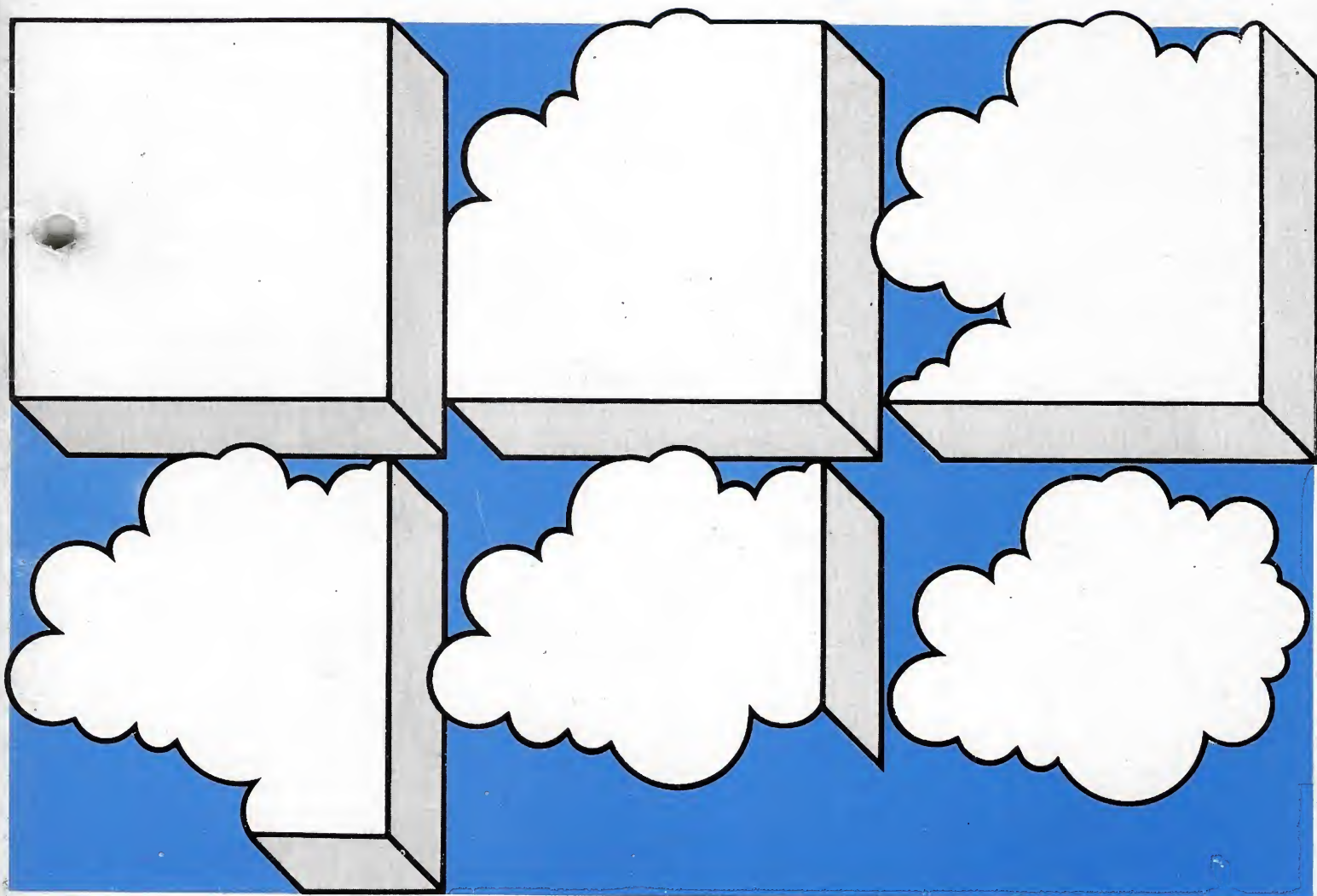
9 780719 096273 >

www.manchesteruniversitypress.co.uk



THE OPEN UNIVERSITY
Mathematics Foundation Course

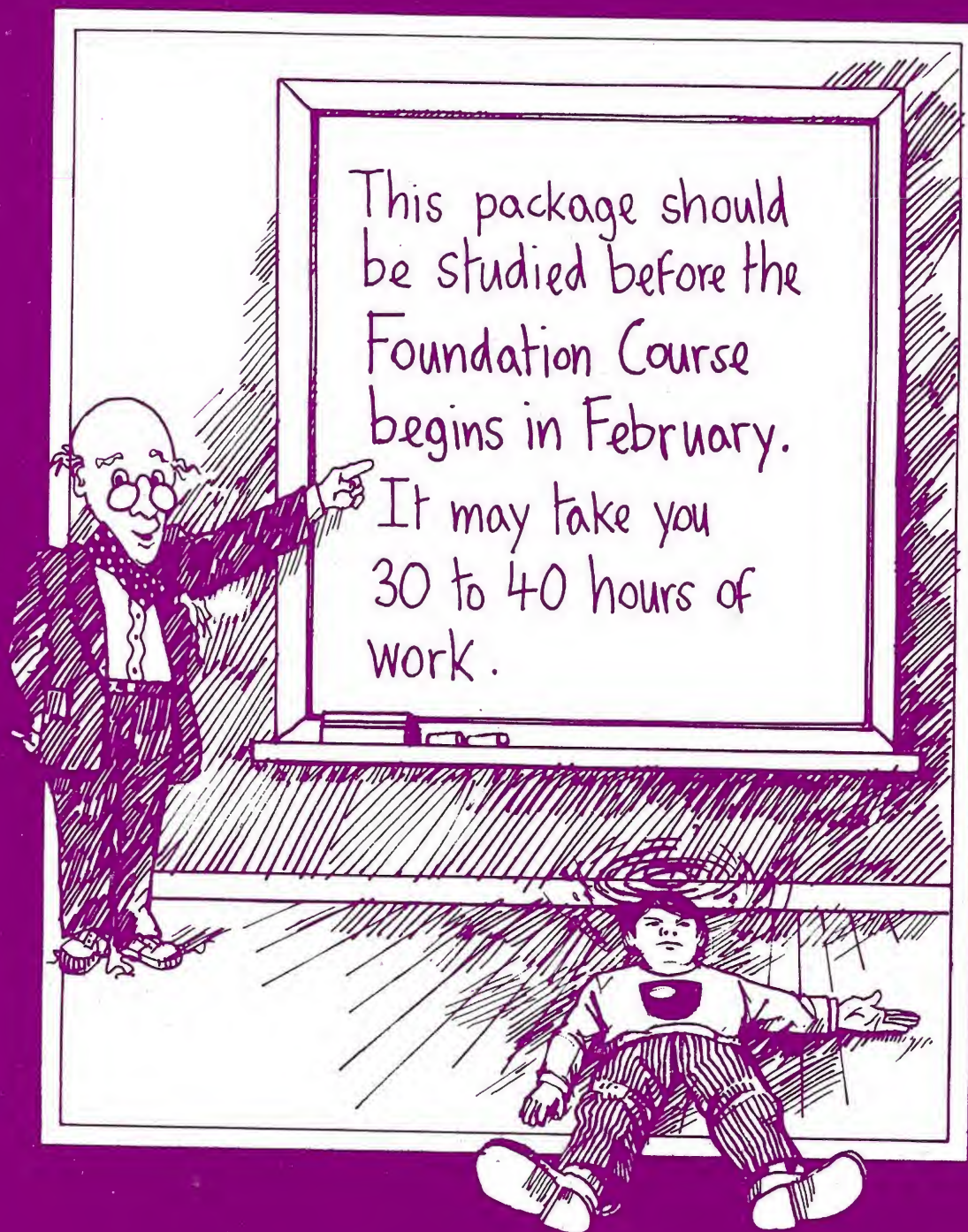
LEARNING AND DOING MATHEMATICS





THE
OPEN UNIVERSITY

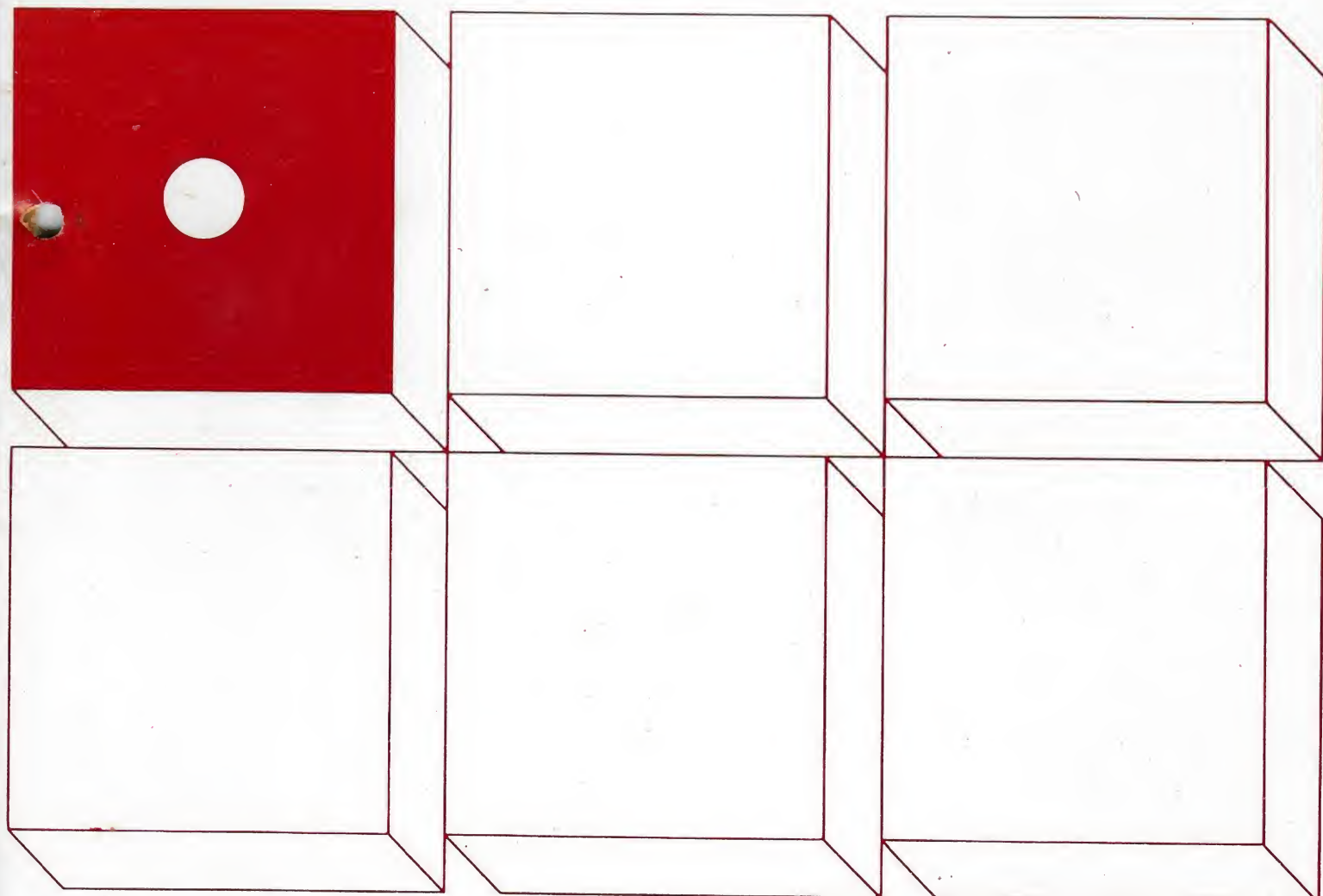
Preparing for the **MATHEMATICS FOUNDATION COURSE**





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block I Beginnings
Unit 1

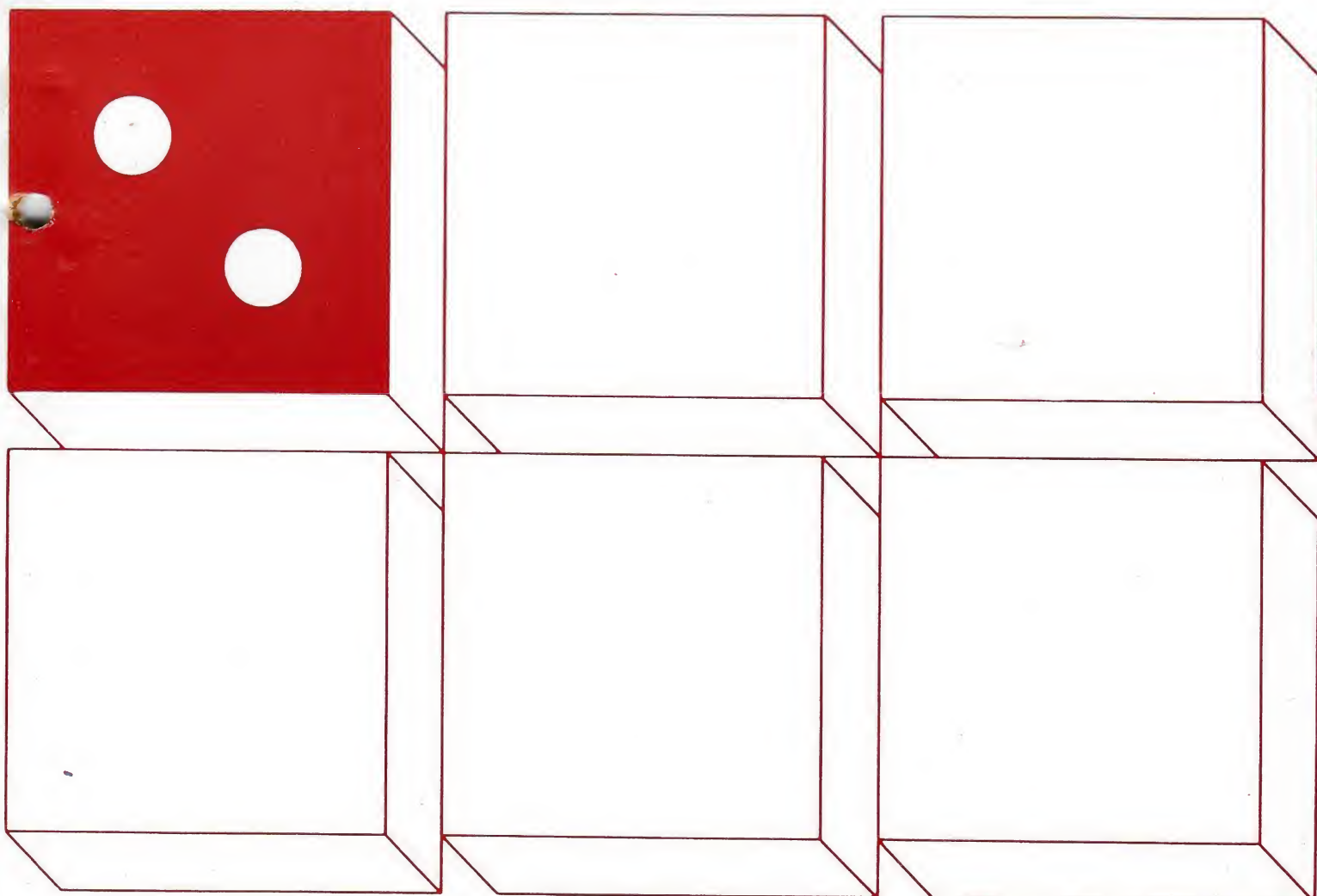
COMPUTATION





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block 1 Beginnings
Unit 2

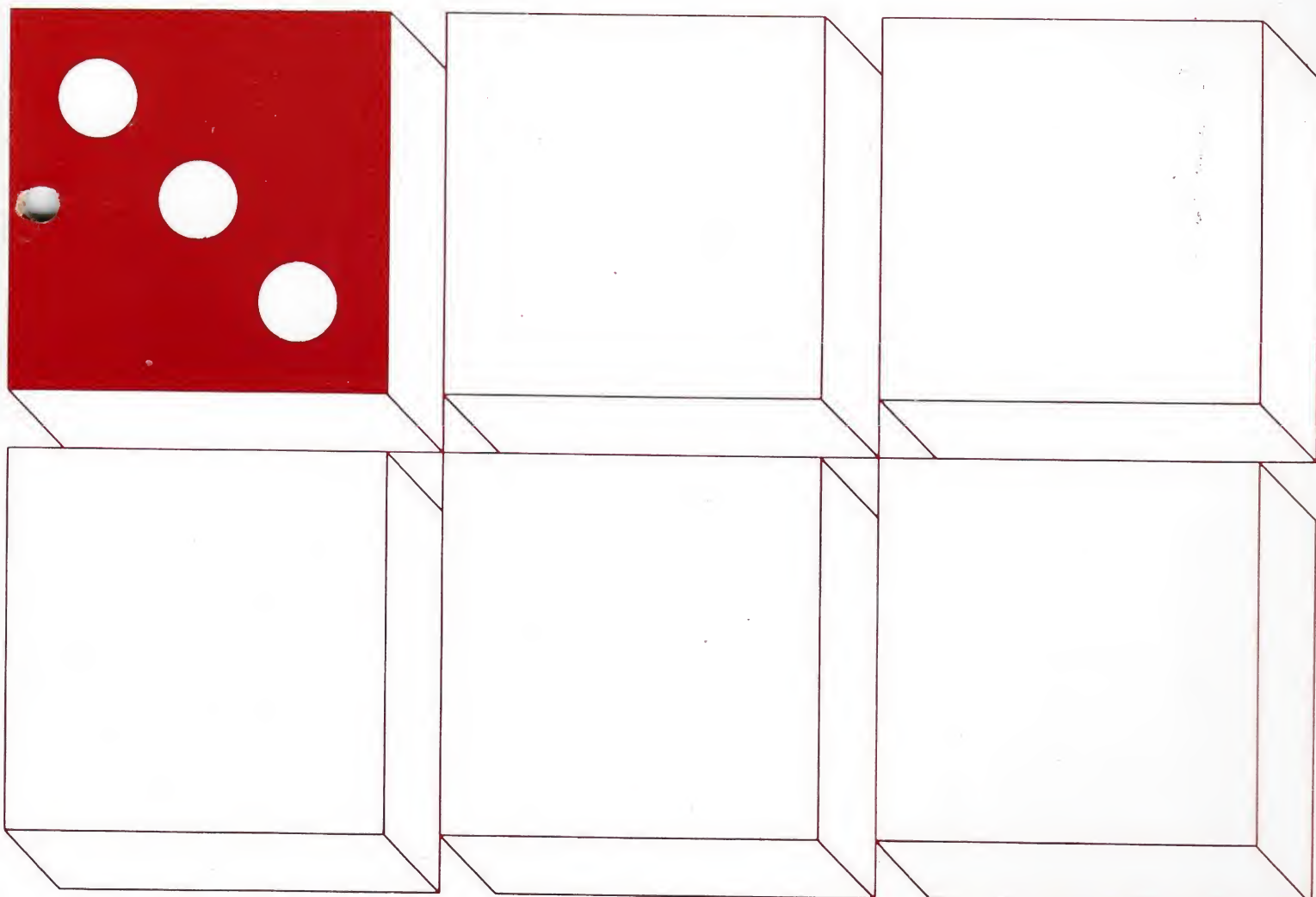
PATTERNS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block I Beginnings
Unit 3

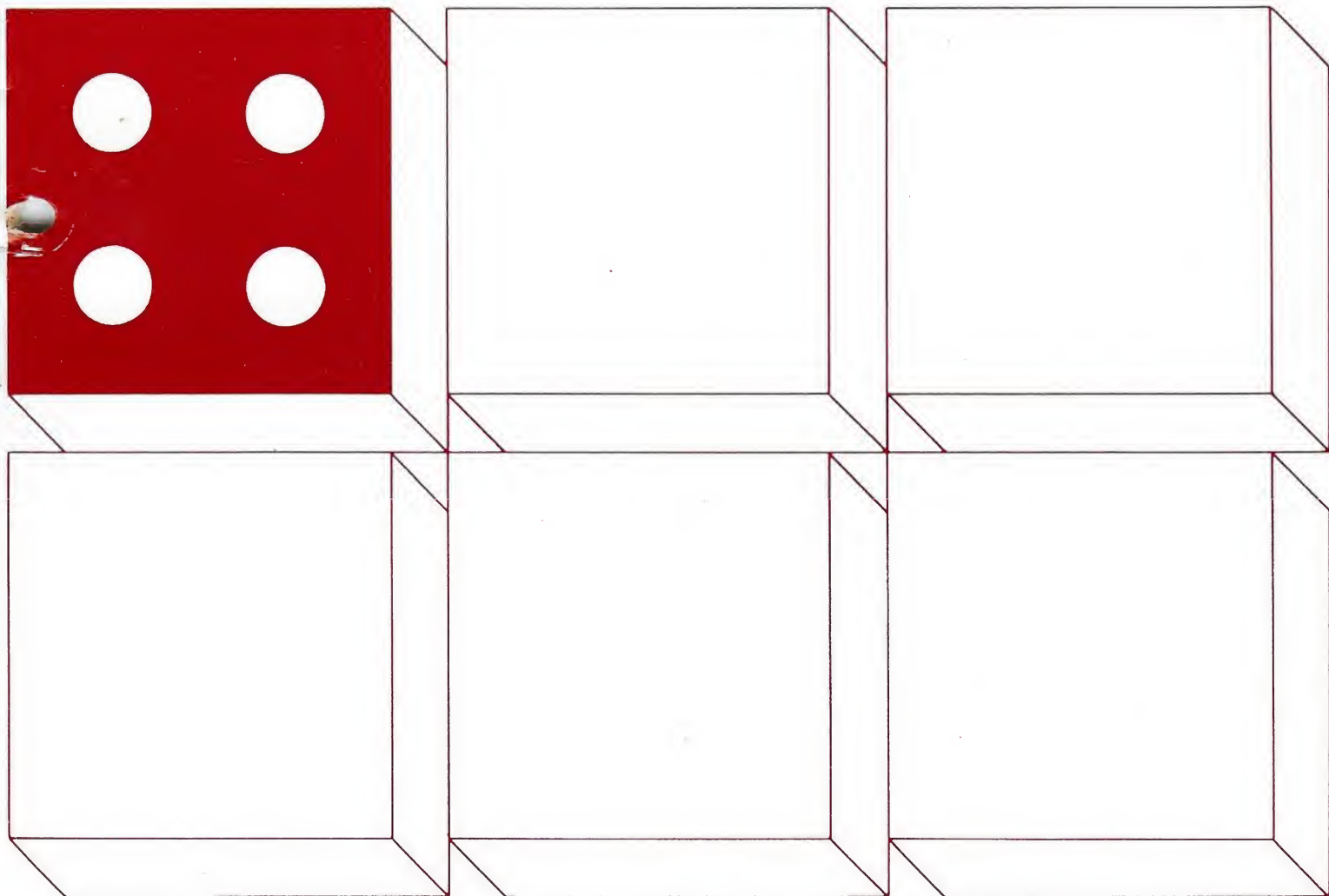
TRANSFORMATIONS AND TRIGONOMETRY





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block I Beginnings
Unit 4

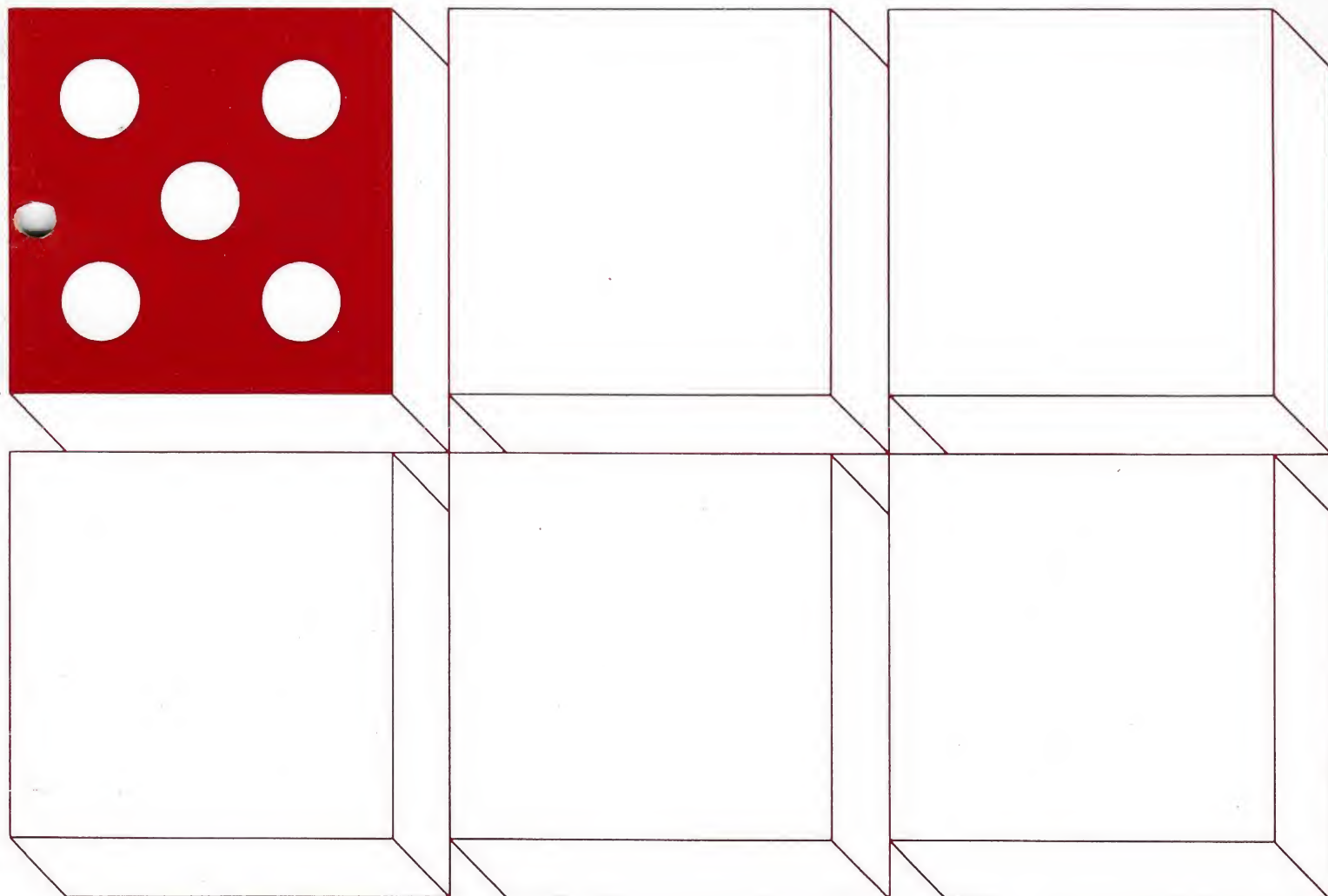
FUNCTIONS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block I Beginnings
Unit 5

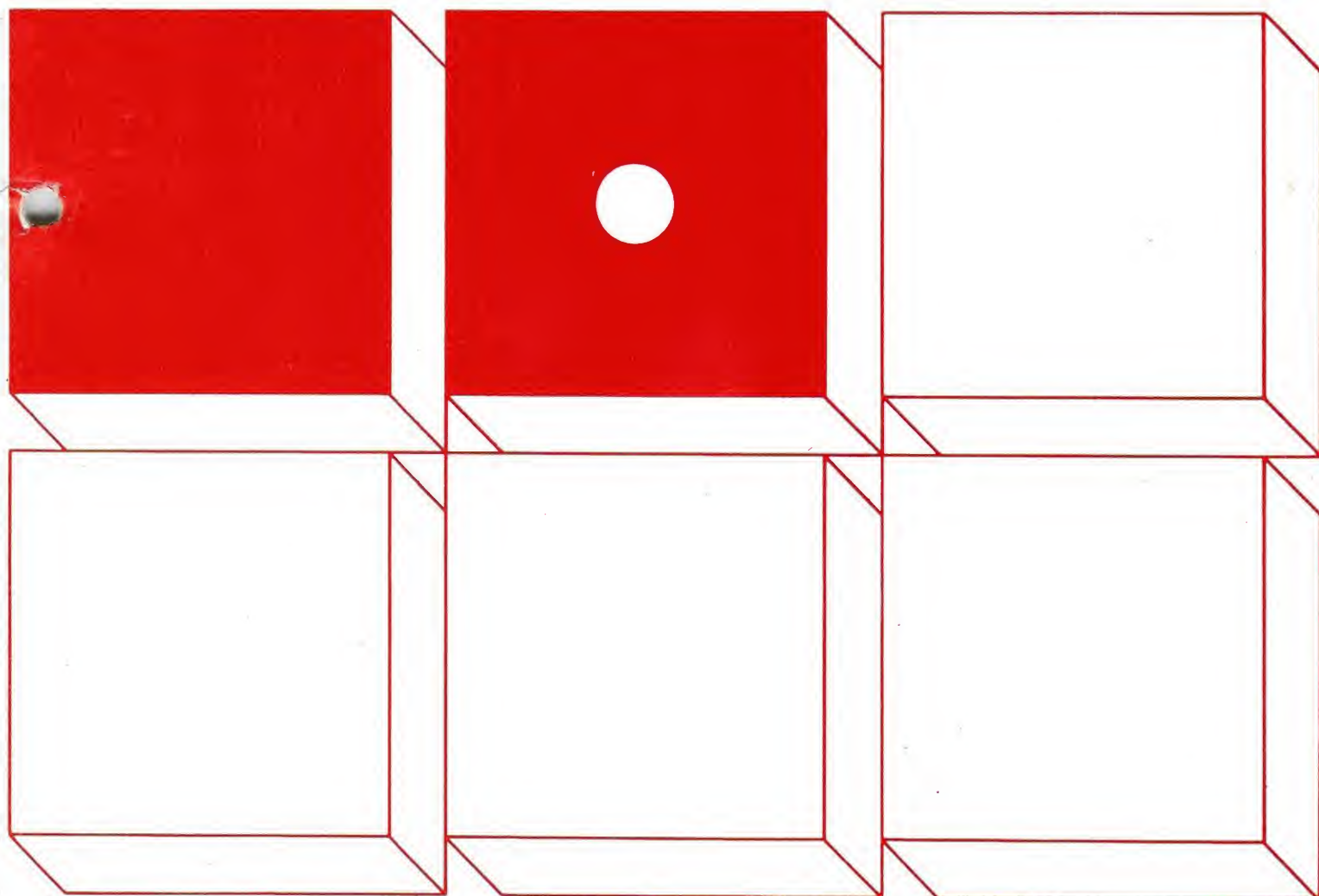
REVIEW





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block II Functions and Numbers
Unit 1

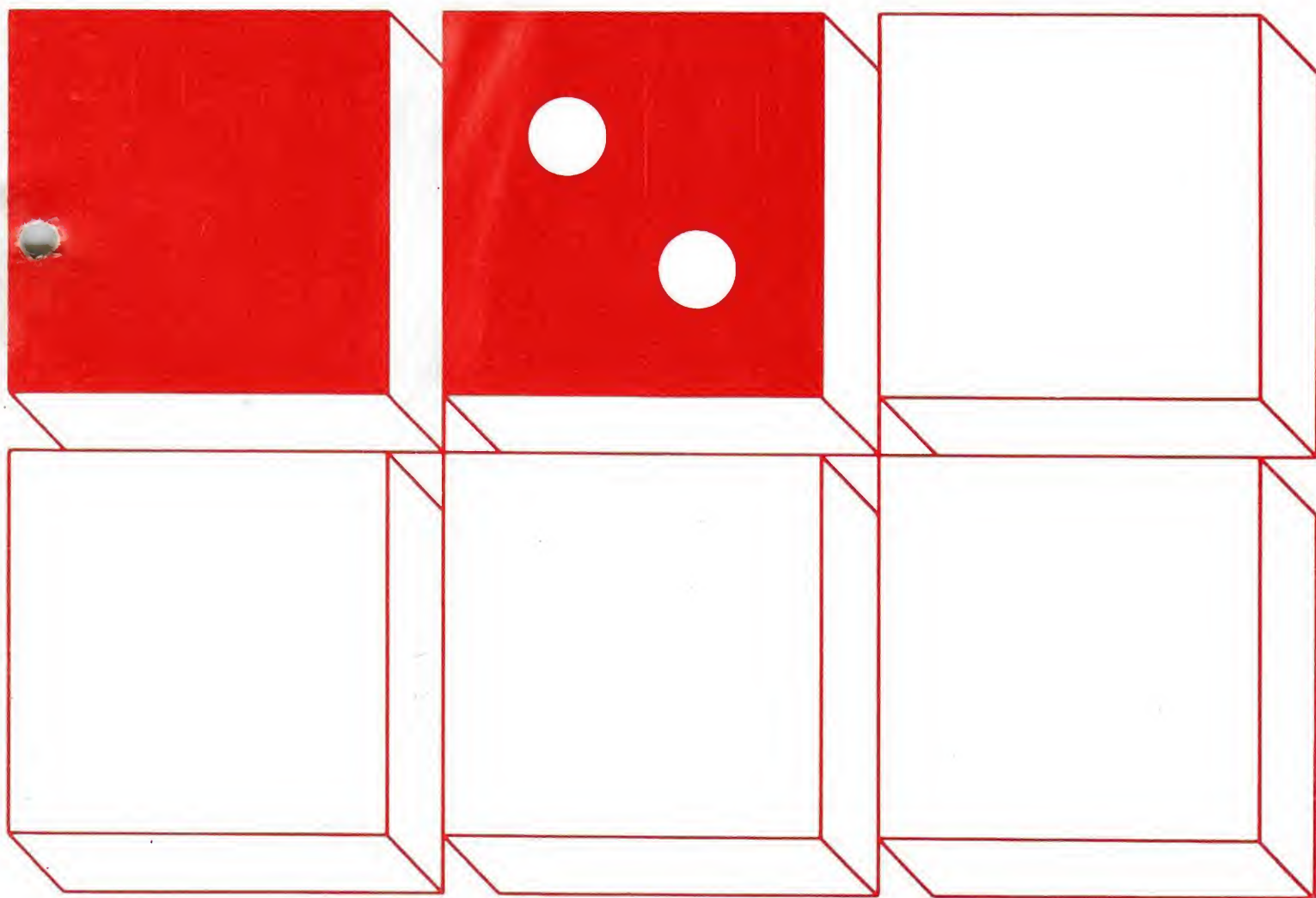
FUNCTIONS AND GRAPHS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block II Functions and Numbers
Unit 2

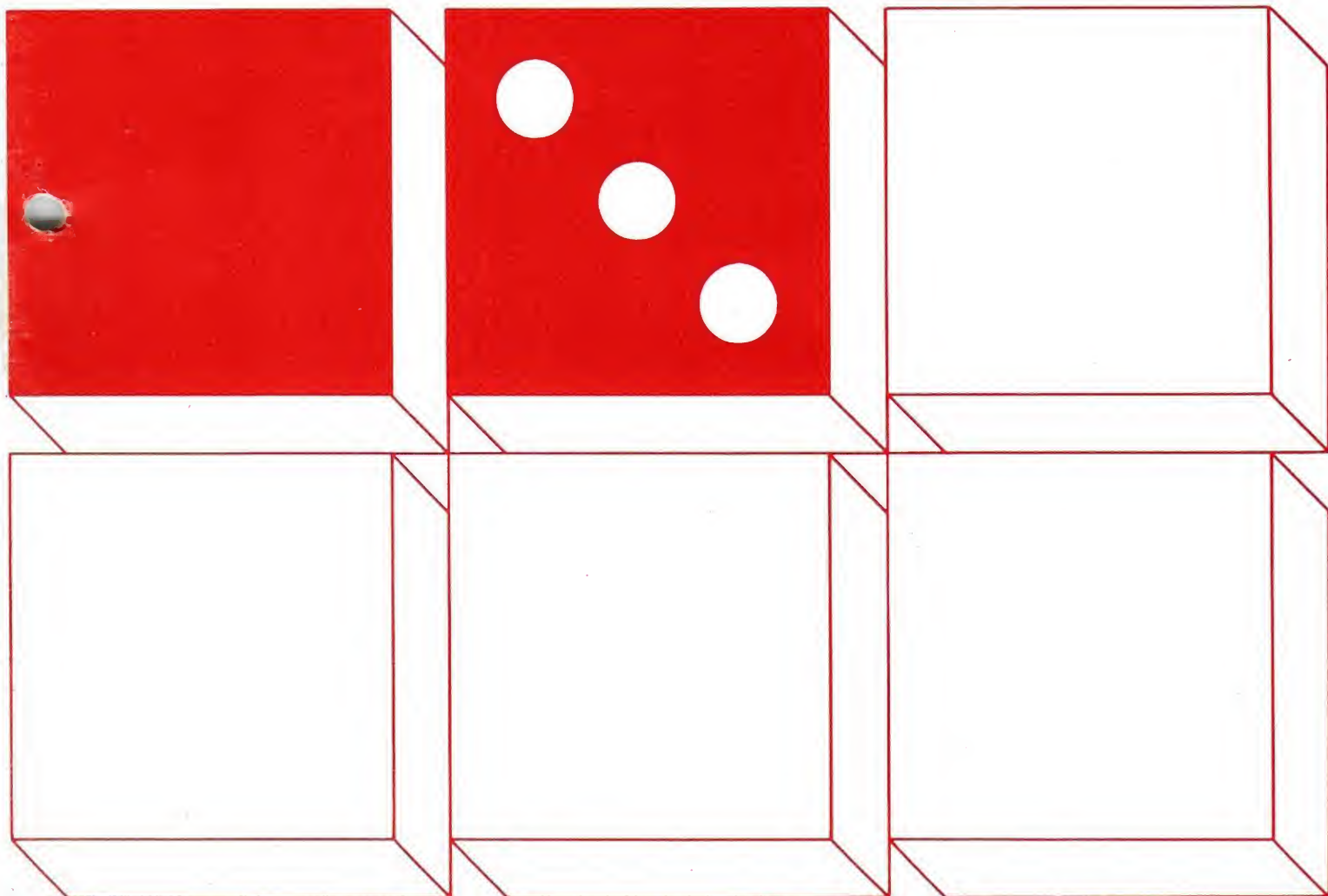
FUNCTIONS AND INEQUALITIES





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block II Functions and Numbers
Unit 3

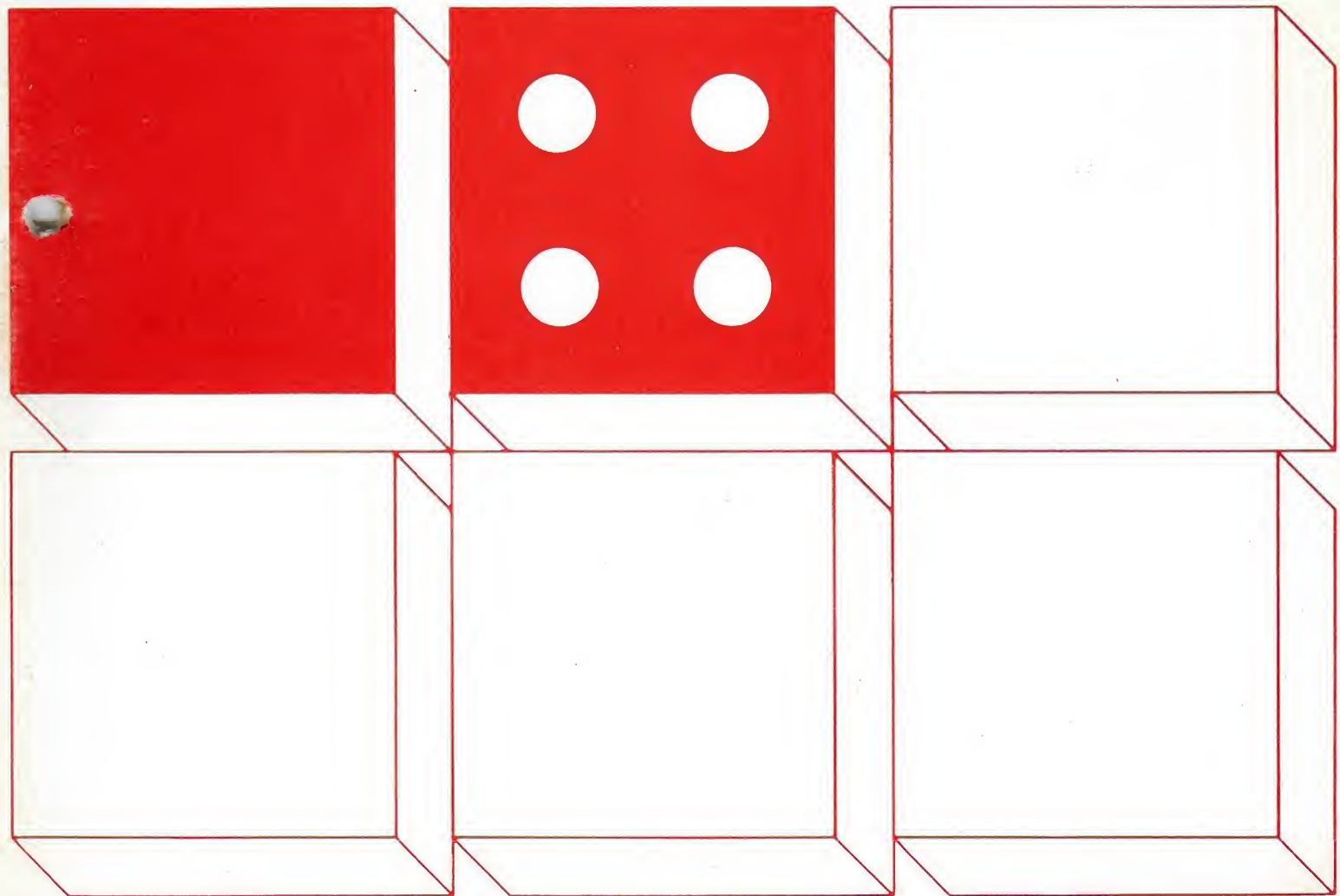
FUNCTIONS AND DATA





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block II Functions and Numbers
Unit 4

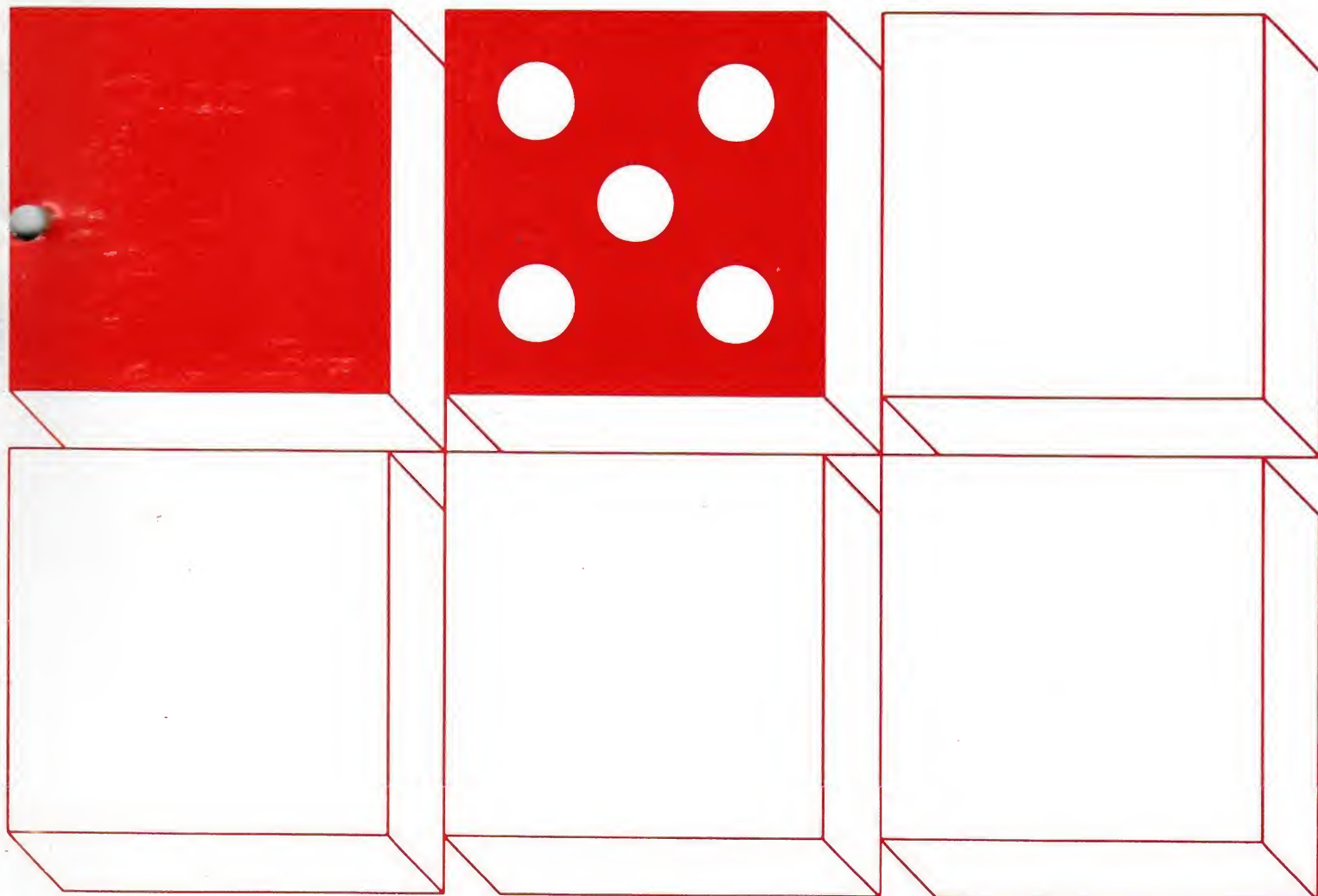
FUNCTIONS AND LIMITS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block II Functions and Number
Unit 5

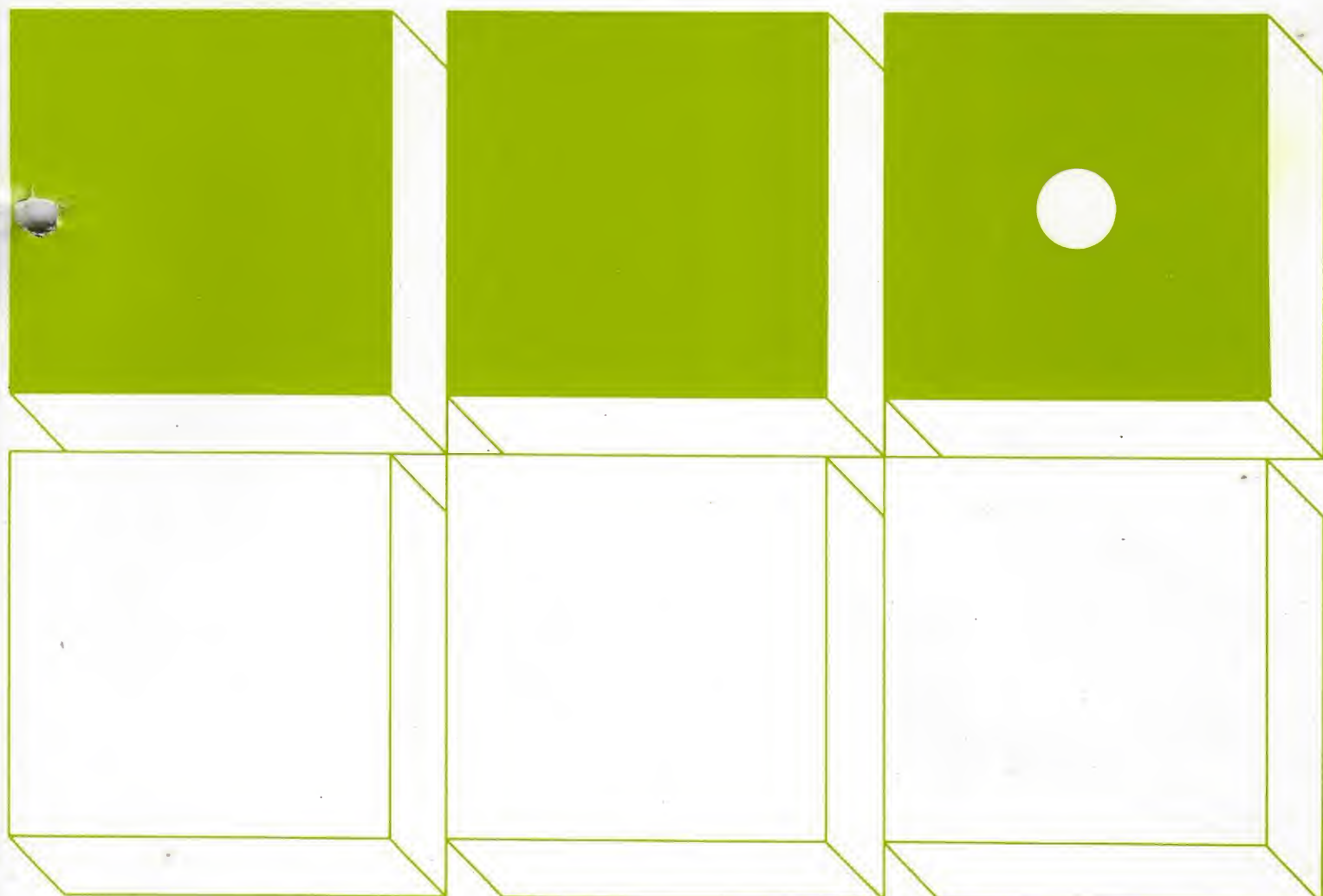
REVIEW





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block III Calculus
Unit 1

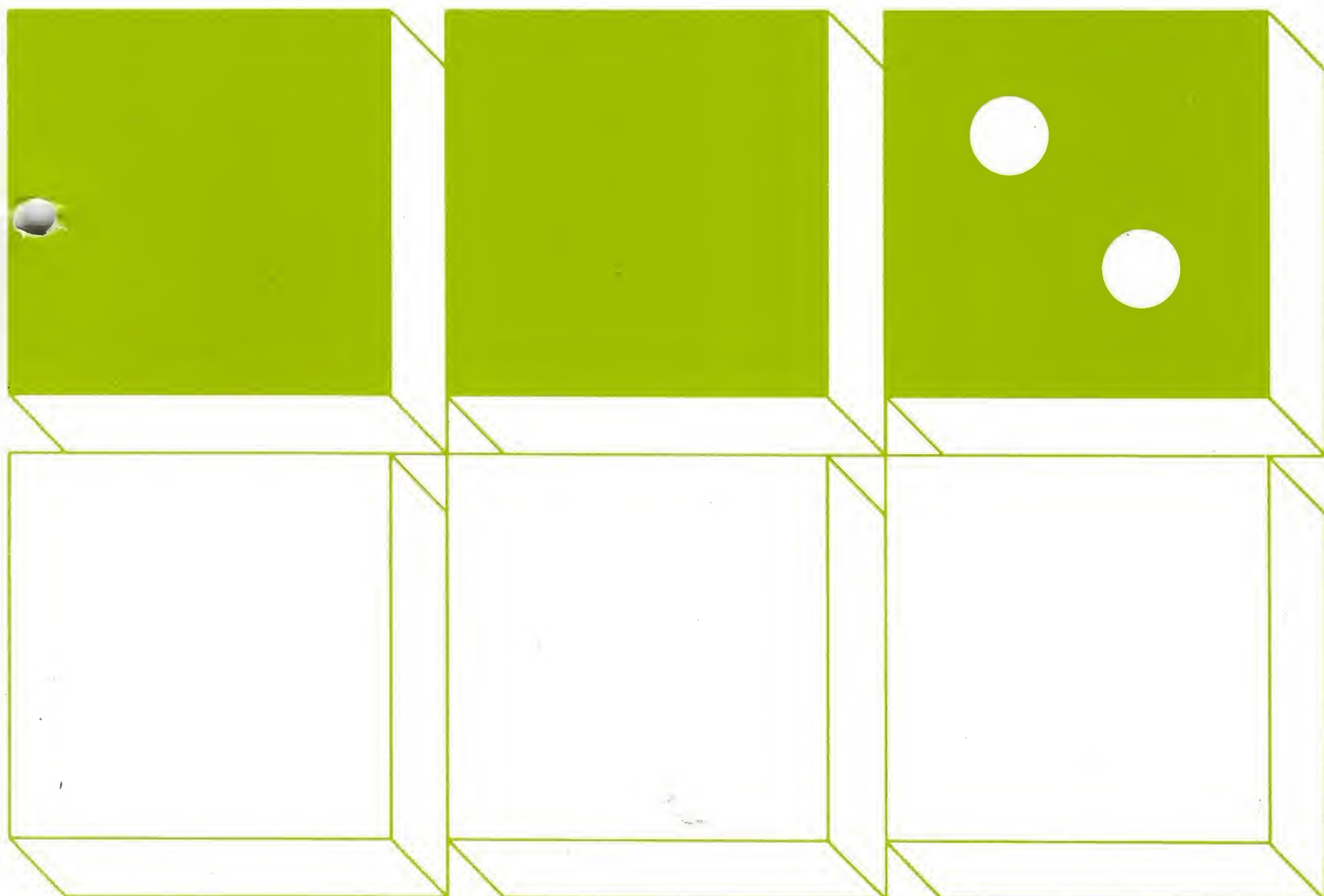
DIFFERENTIATION I





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block III Calculus
Unit 2

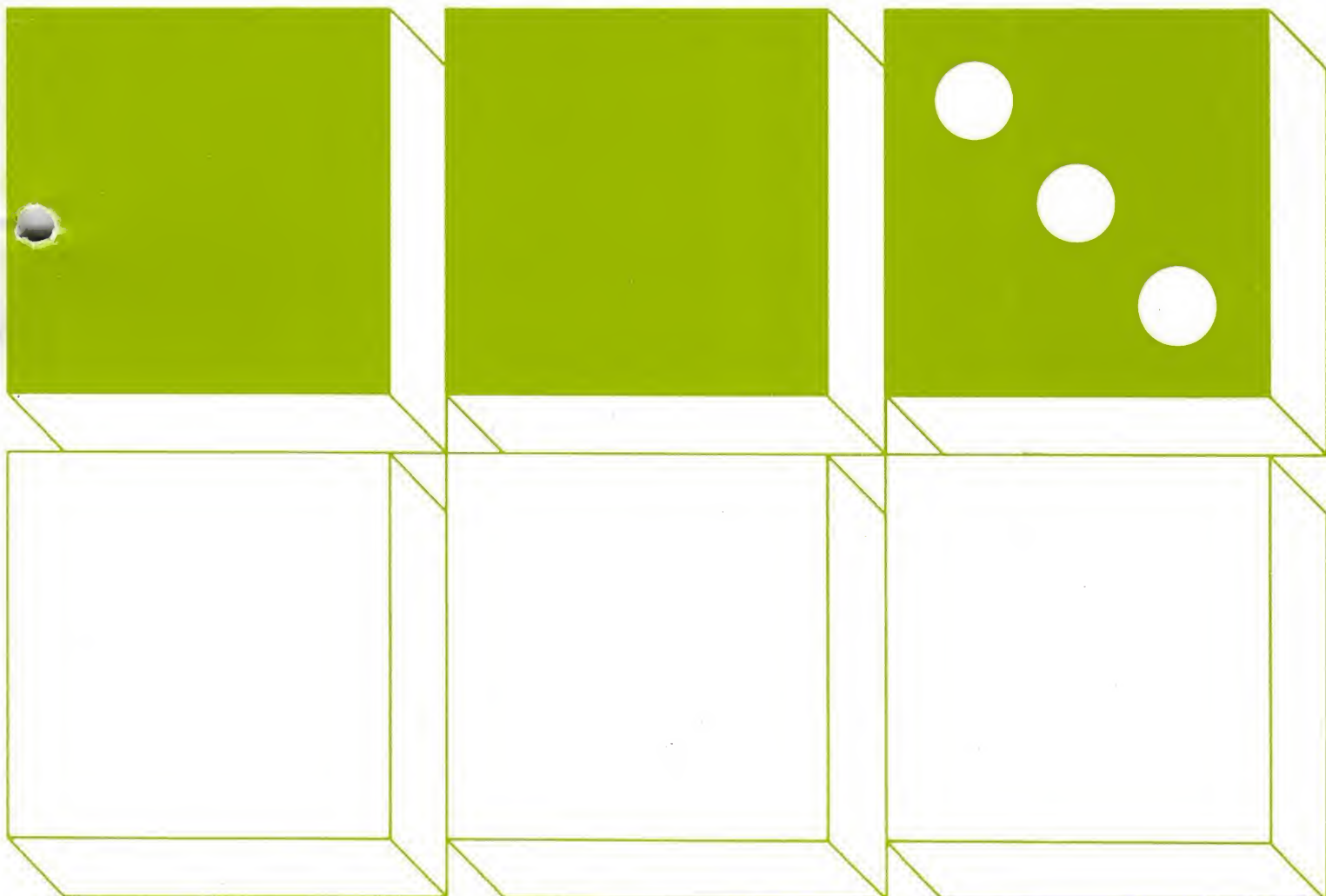
DIFFERENTIATION II





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block III Calculus
Unit 3

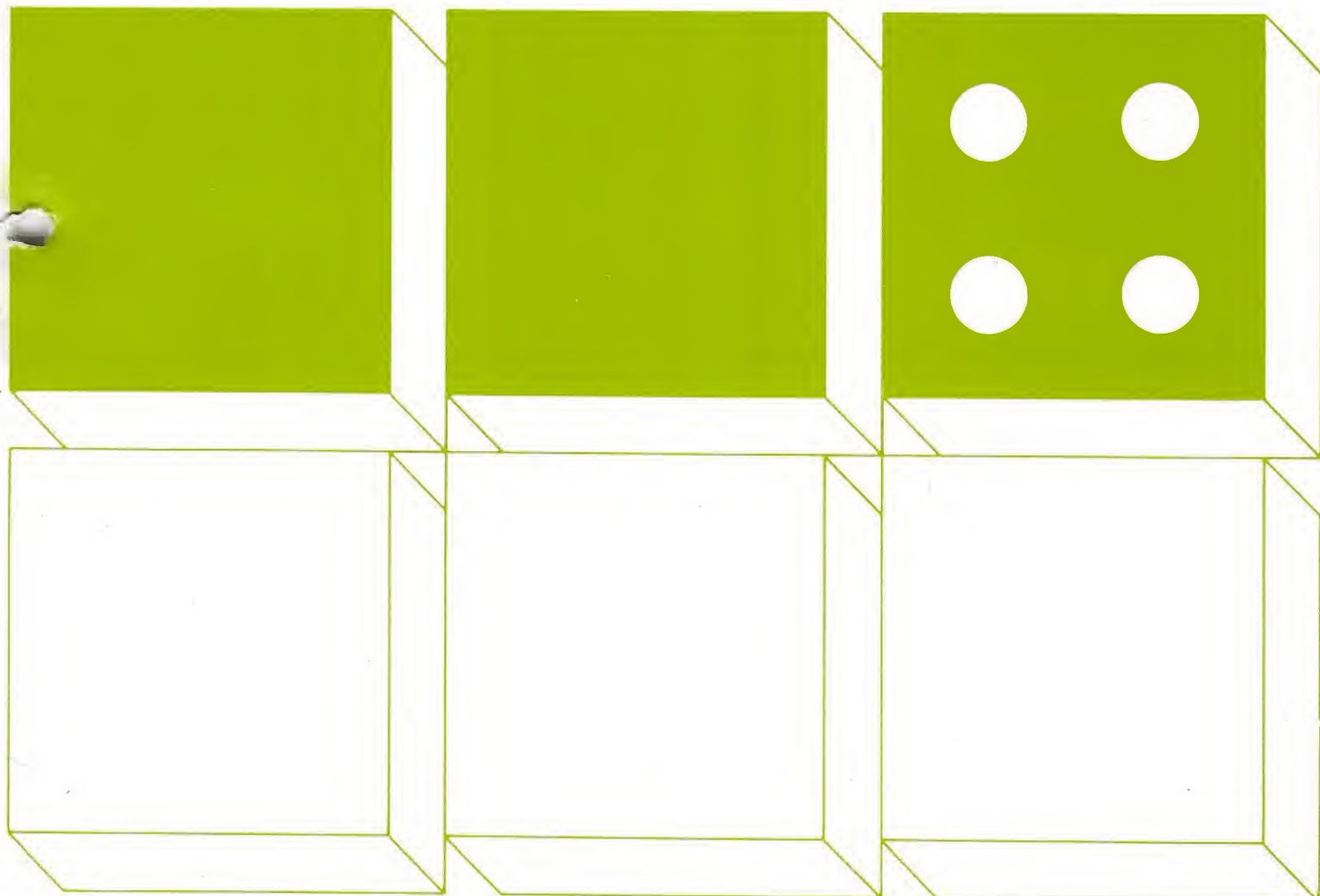
INTEGRATION I





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block III Calculus
Unit 4

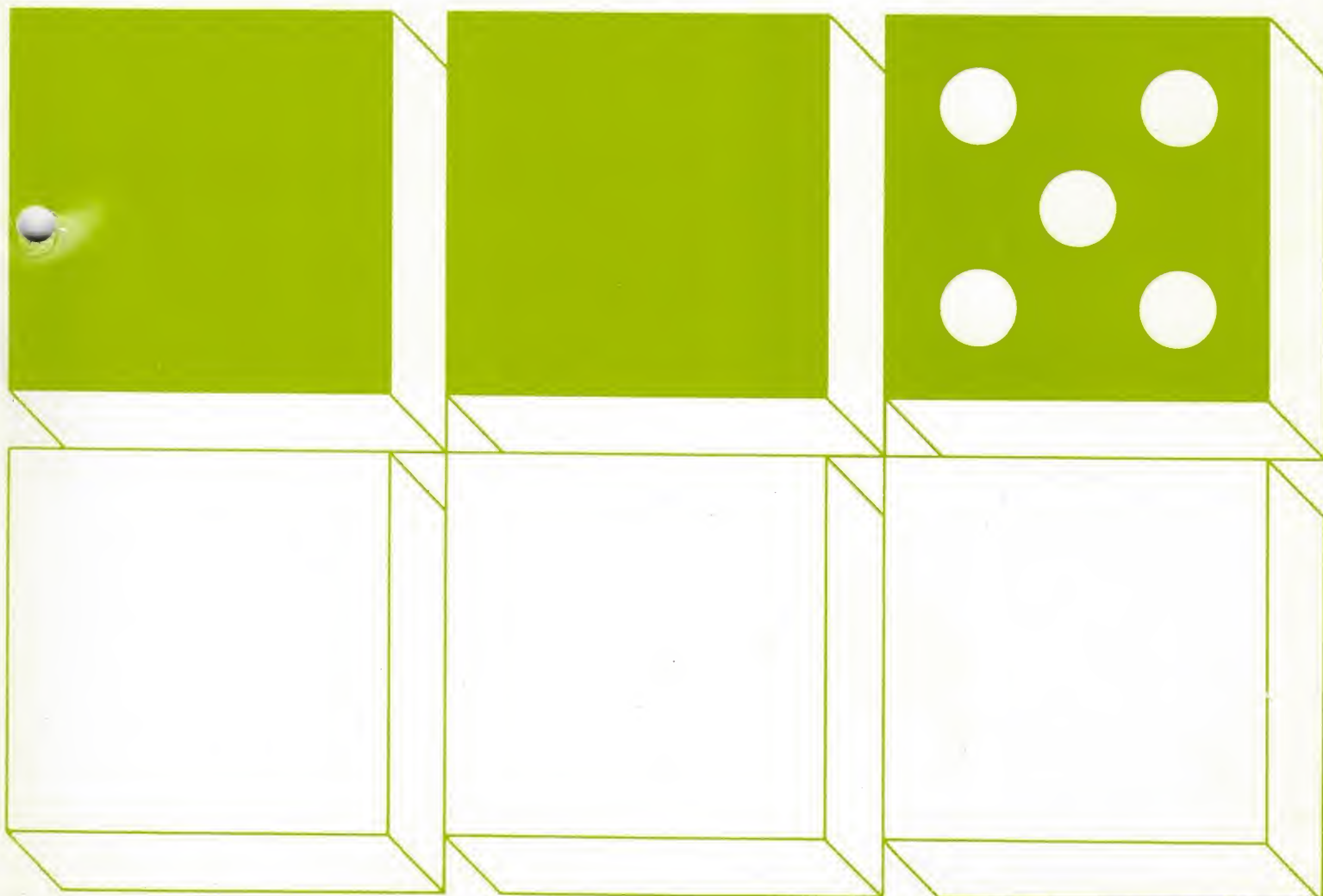
INTEGRATION II





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block III Calculus
Unit 5

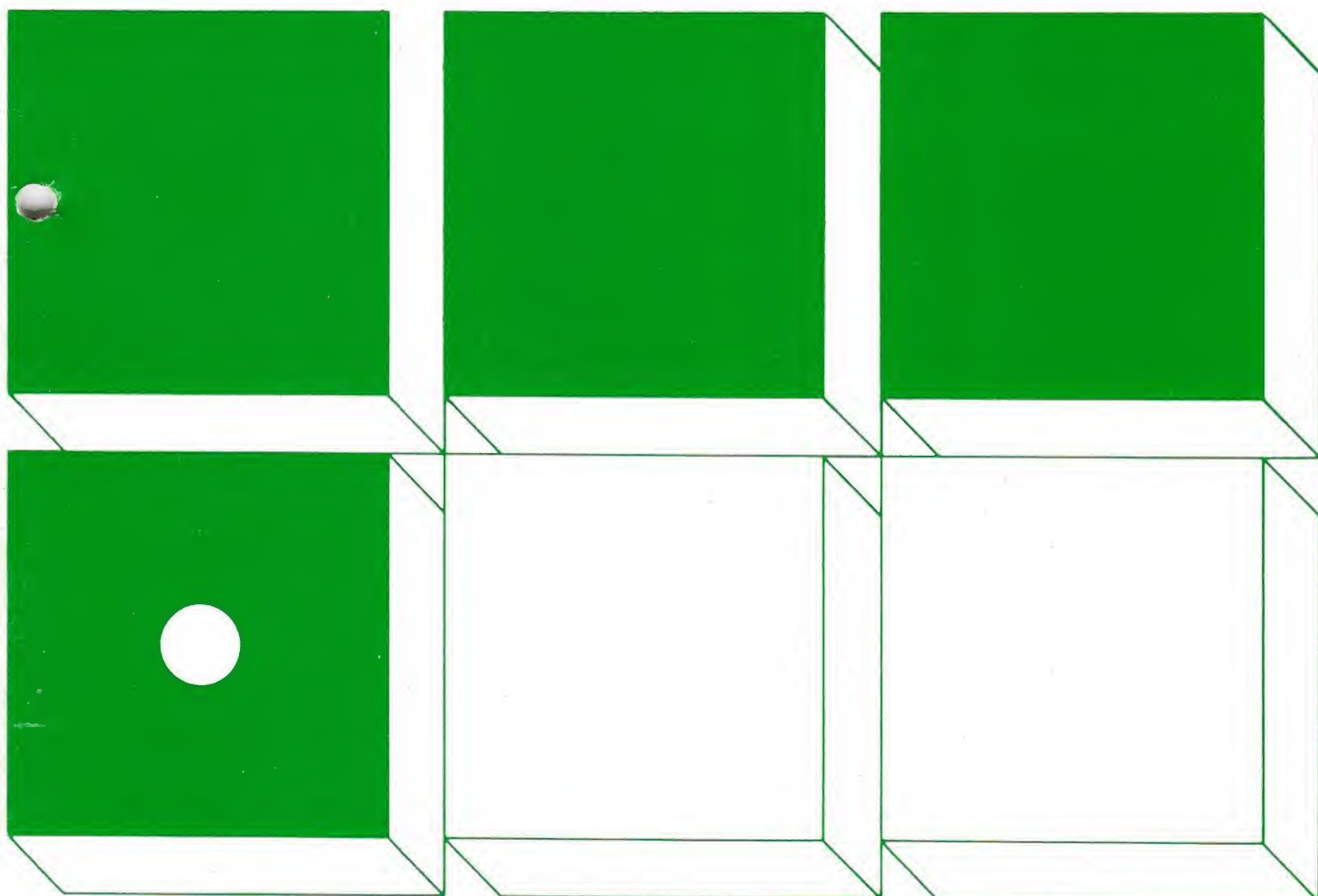
REVIEW





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block IV Matrices
Unit 1

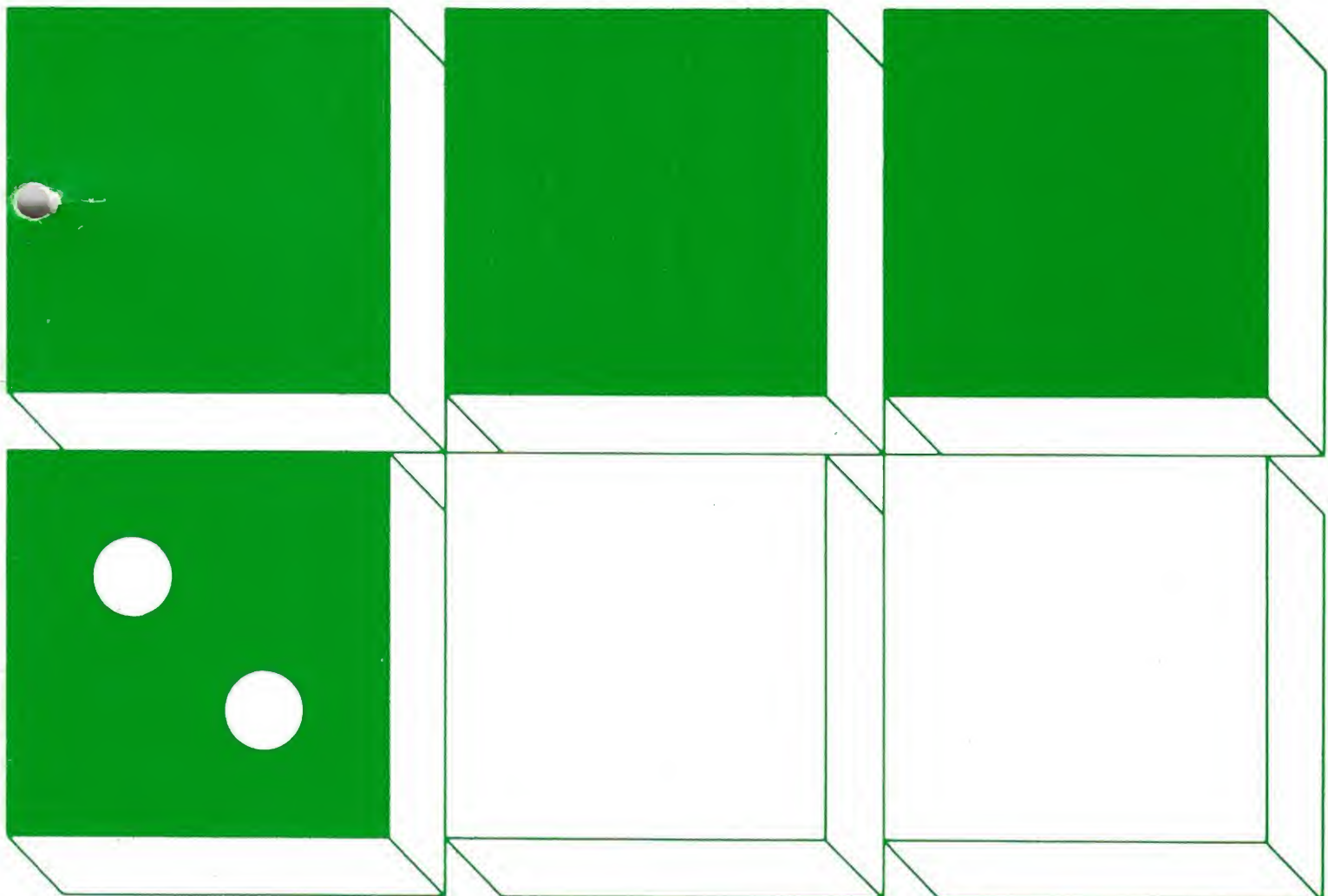
MATRICES AND NETWORKS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block IV Matrices
Unit 2

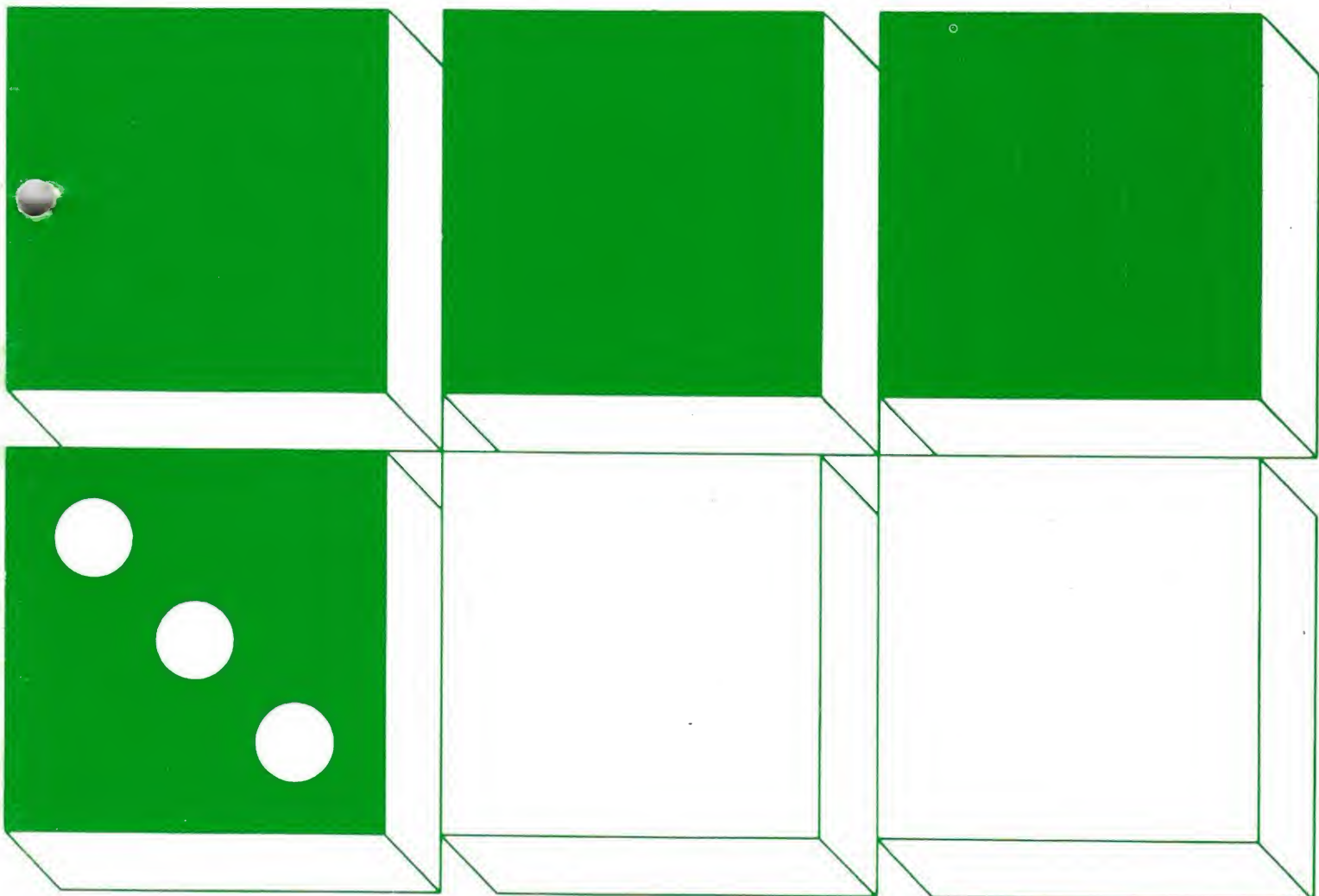
MATRICES AND TRANSFORMATIONS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block IV Matrices
Unit 3

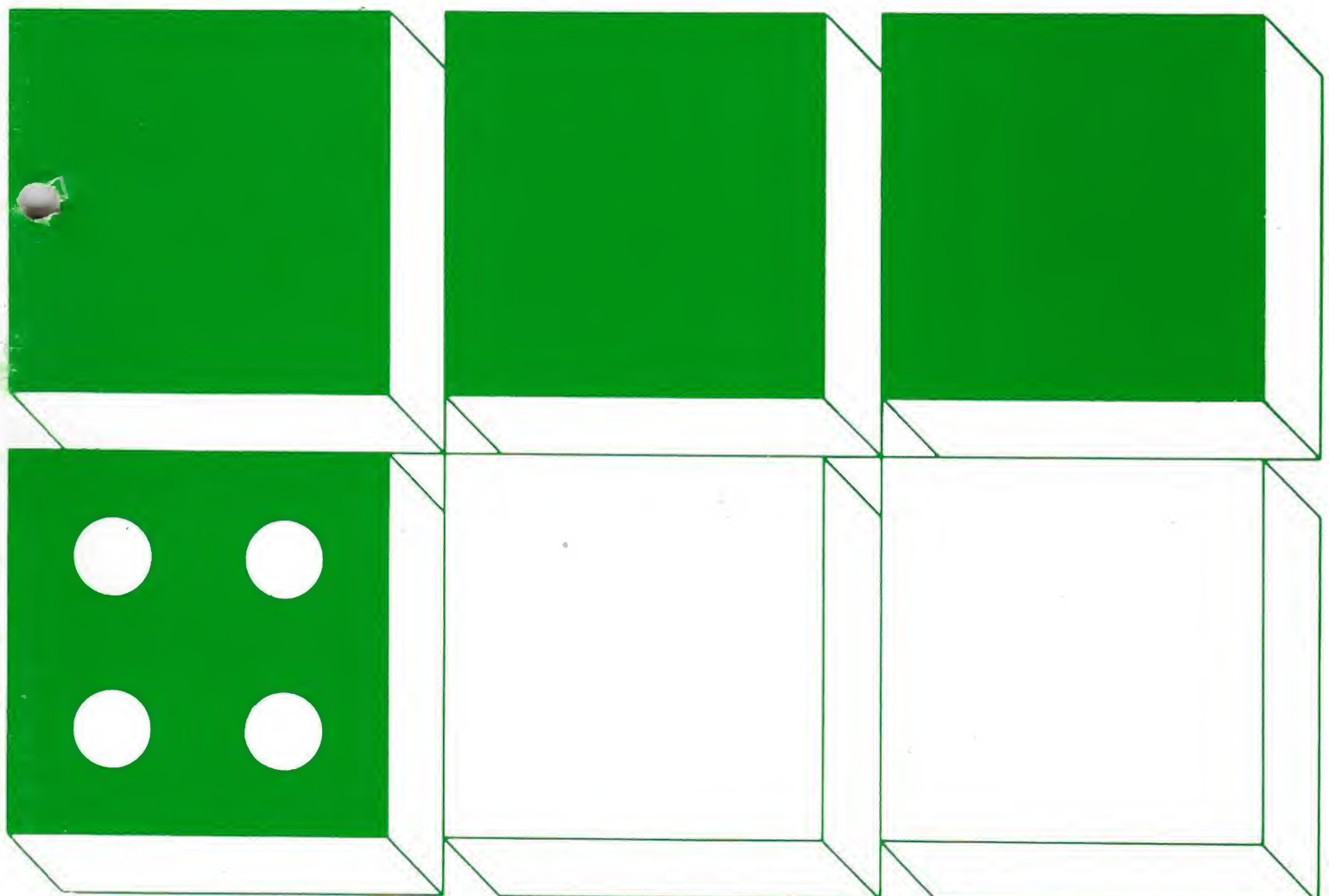
CONICS AND MATRIX ALGEBRA





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block IV Matrices
Unit 4

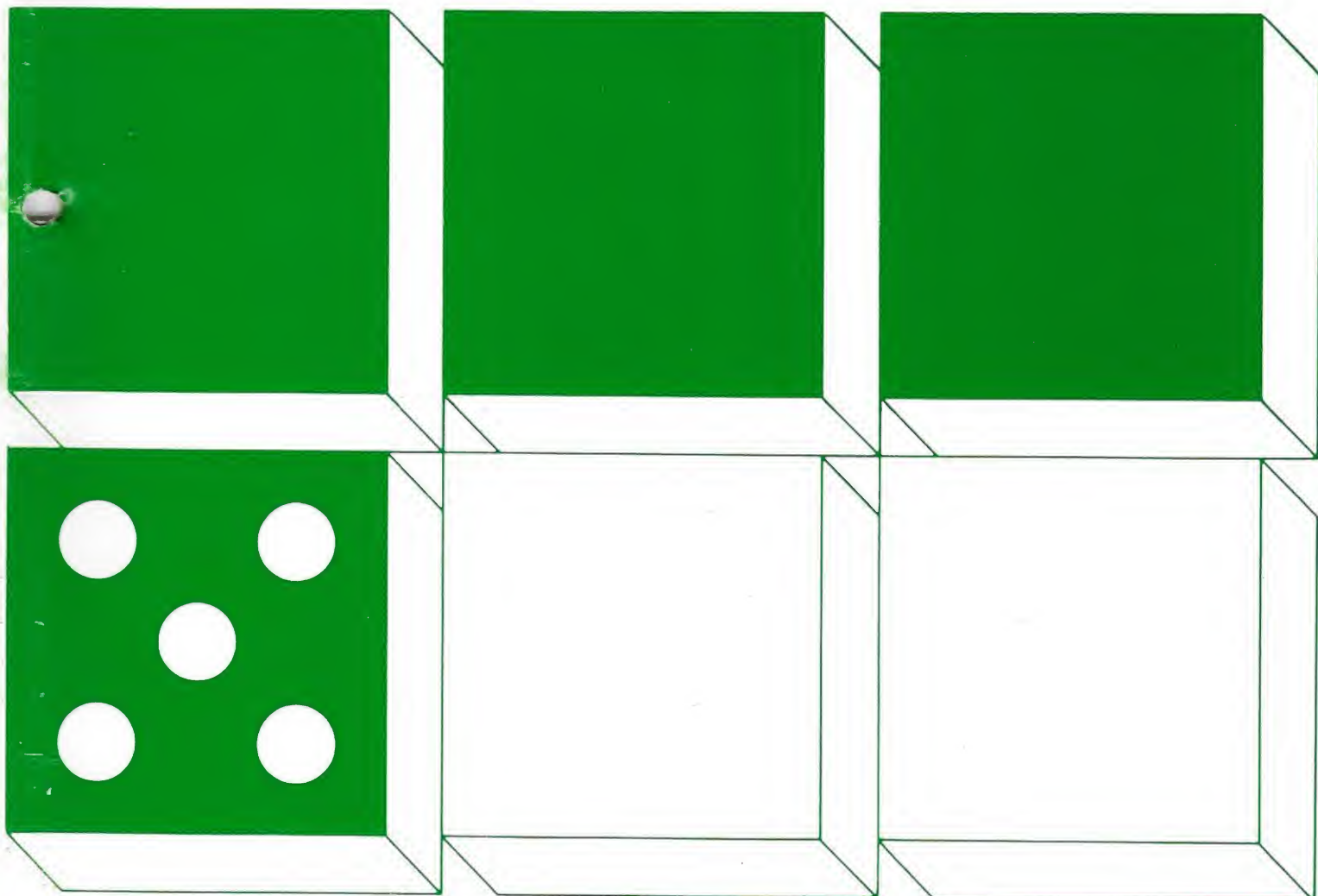
MATRIX POWER





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block IV Matrices
Unit 5

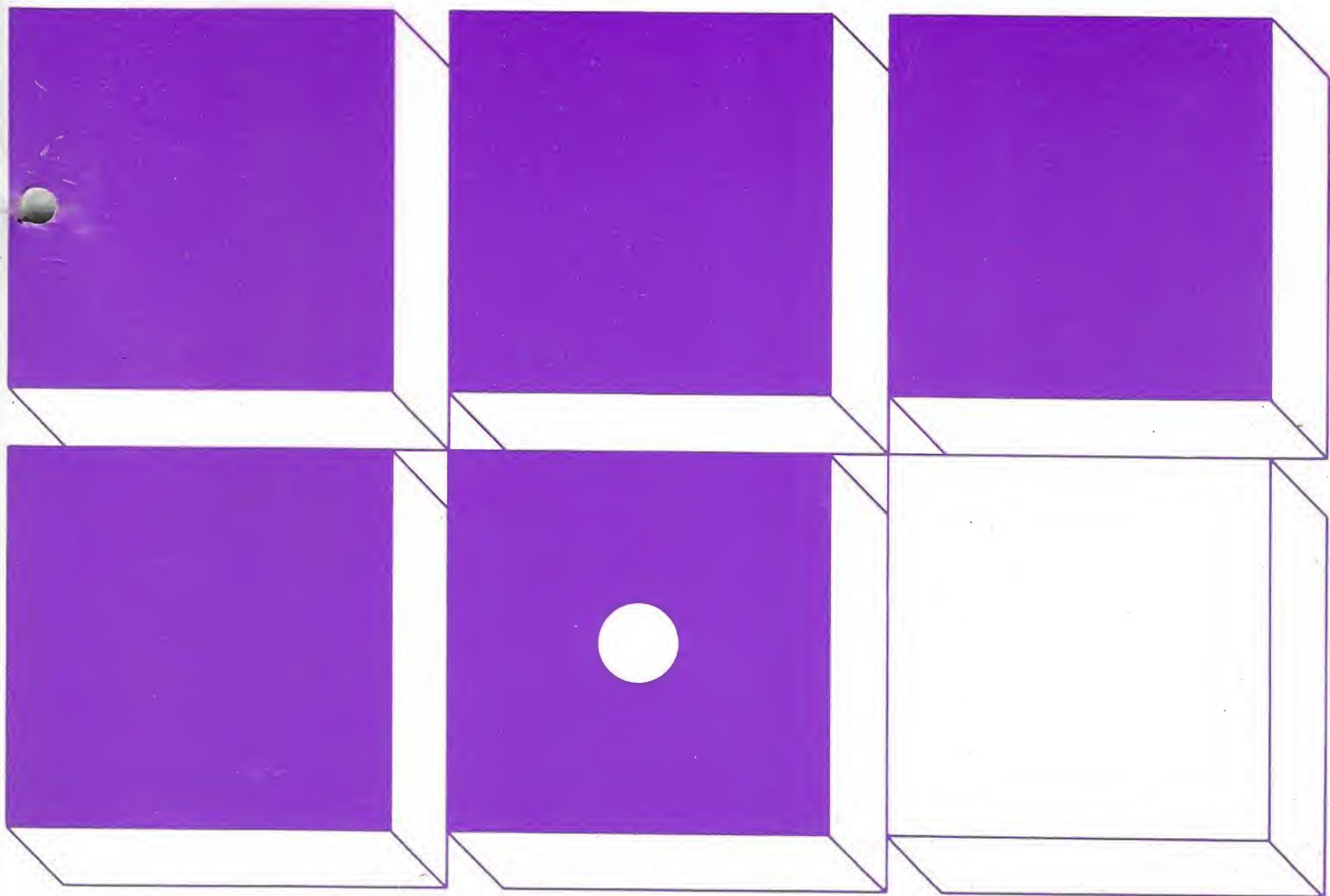
REVIEW





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block V Mathematical Modelling
Unit 1

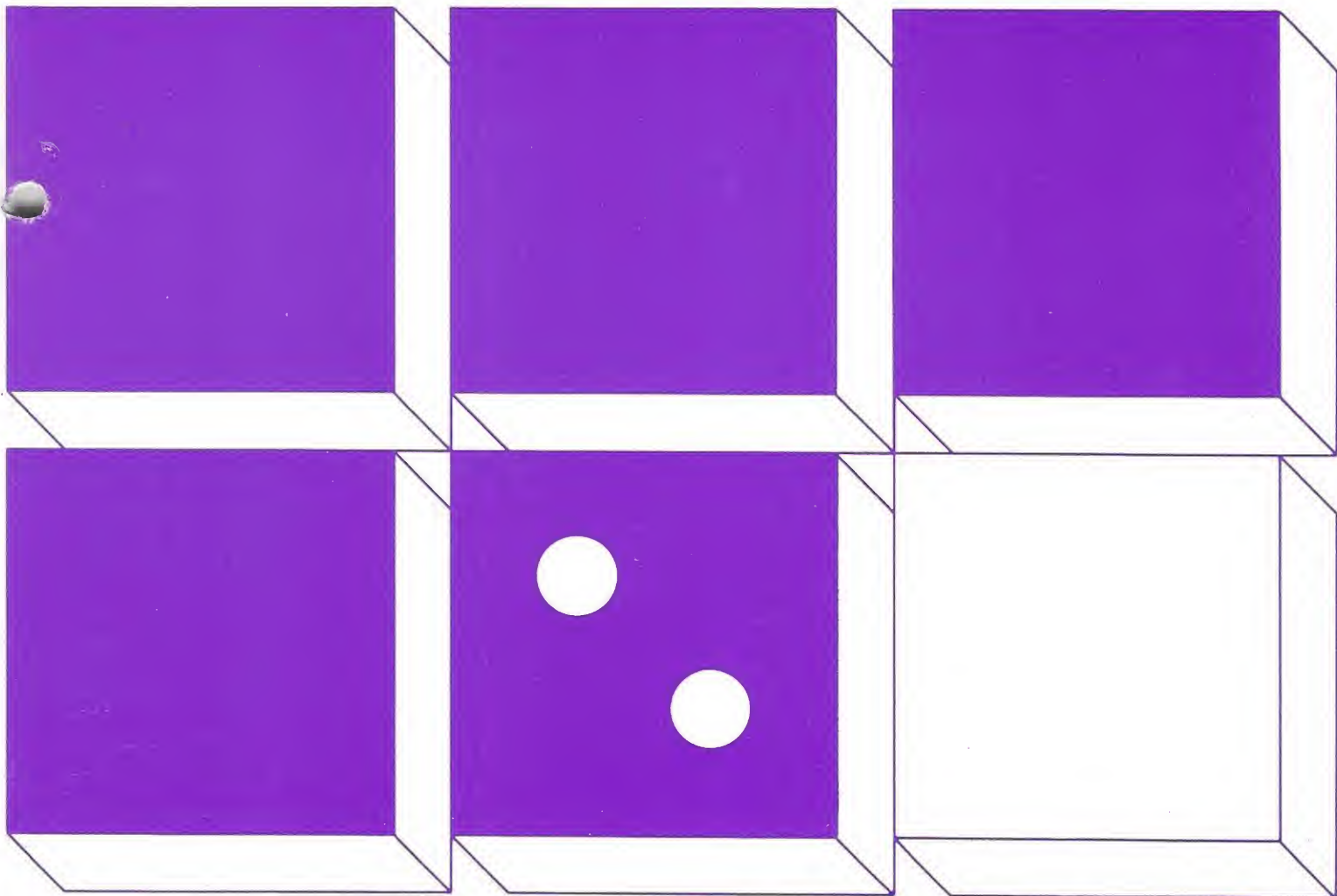
RELATIONS FROM DATA





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block V Mathematical Modelling
Unit 2

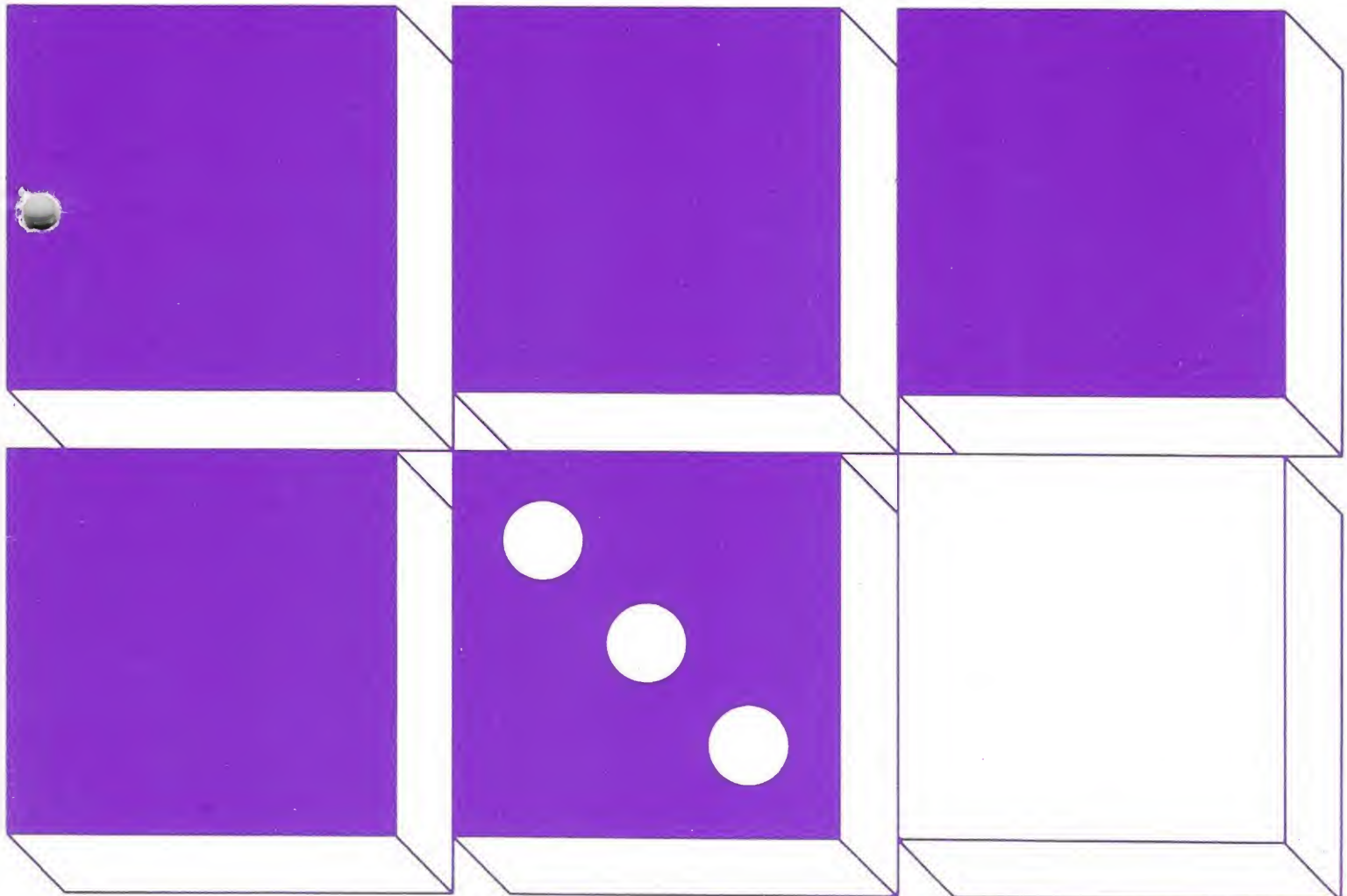
RELATIONS FROM REASONING





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block V Mathematical Modelling
Unit 3

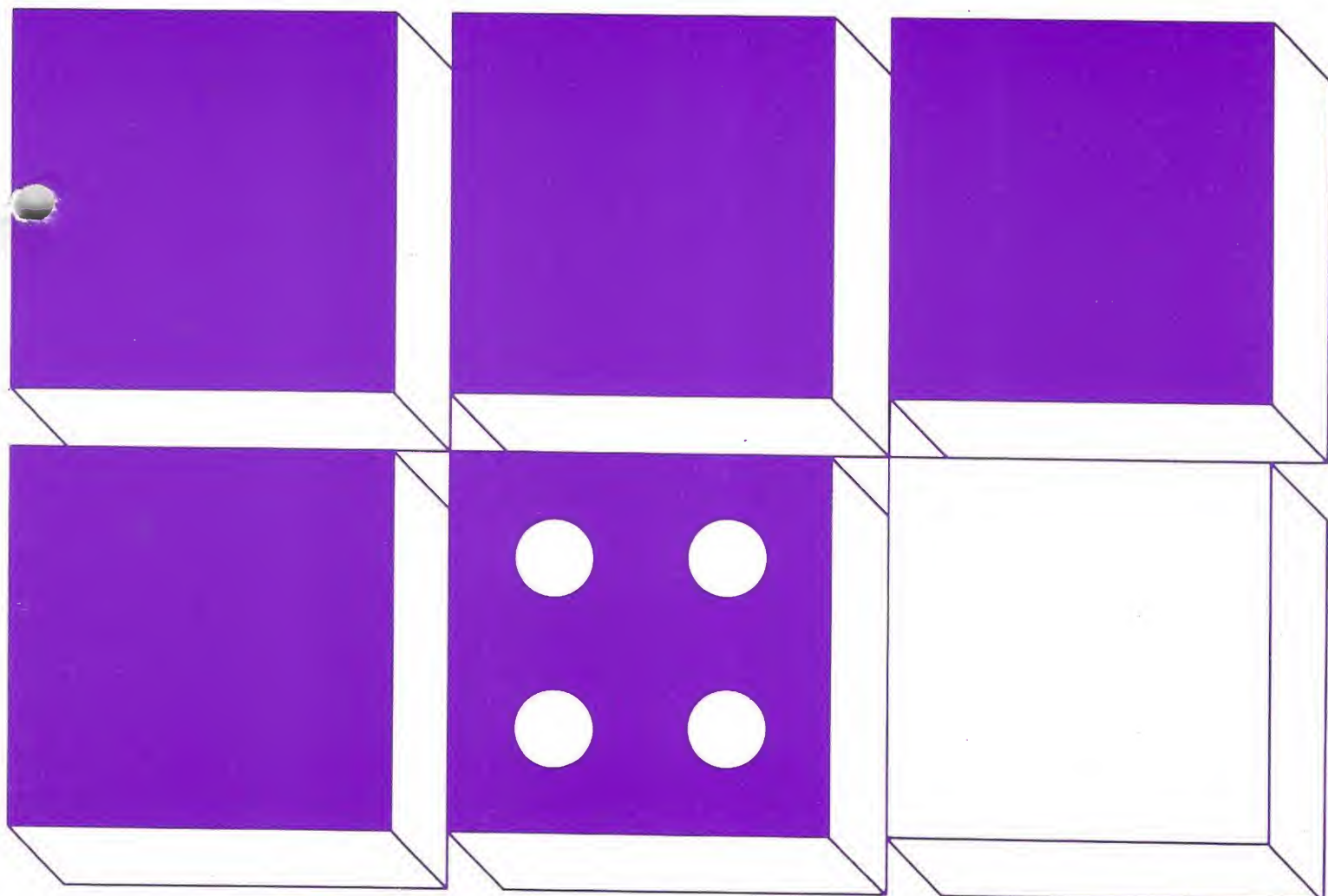
DIFFERENTIAL EQUATIONS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block V Mathematical Modelling
Unit 4

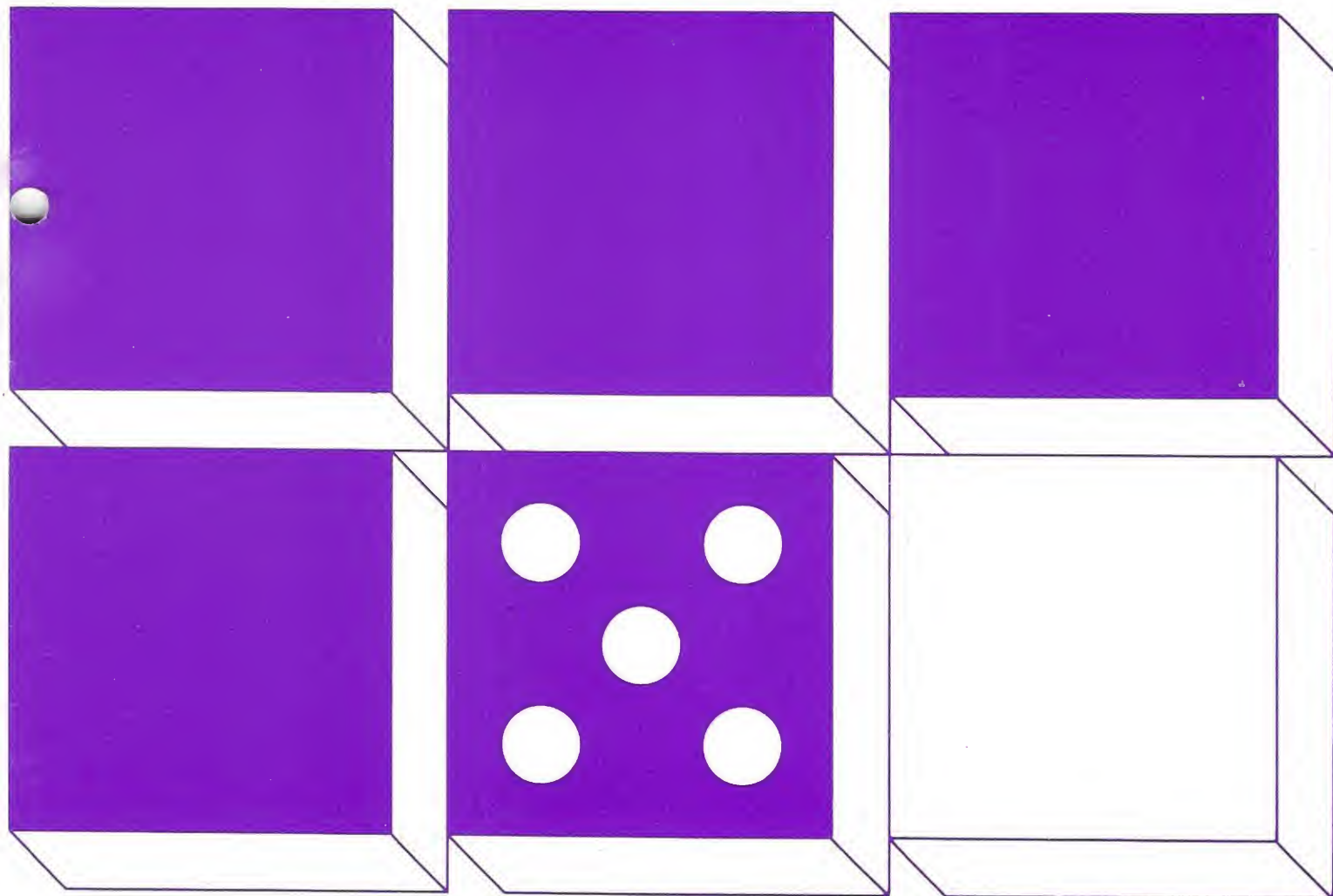
VECTORS AND APPLICATIONS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block V Mathematical Modelling
Unit 5

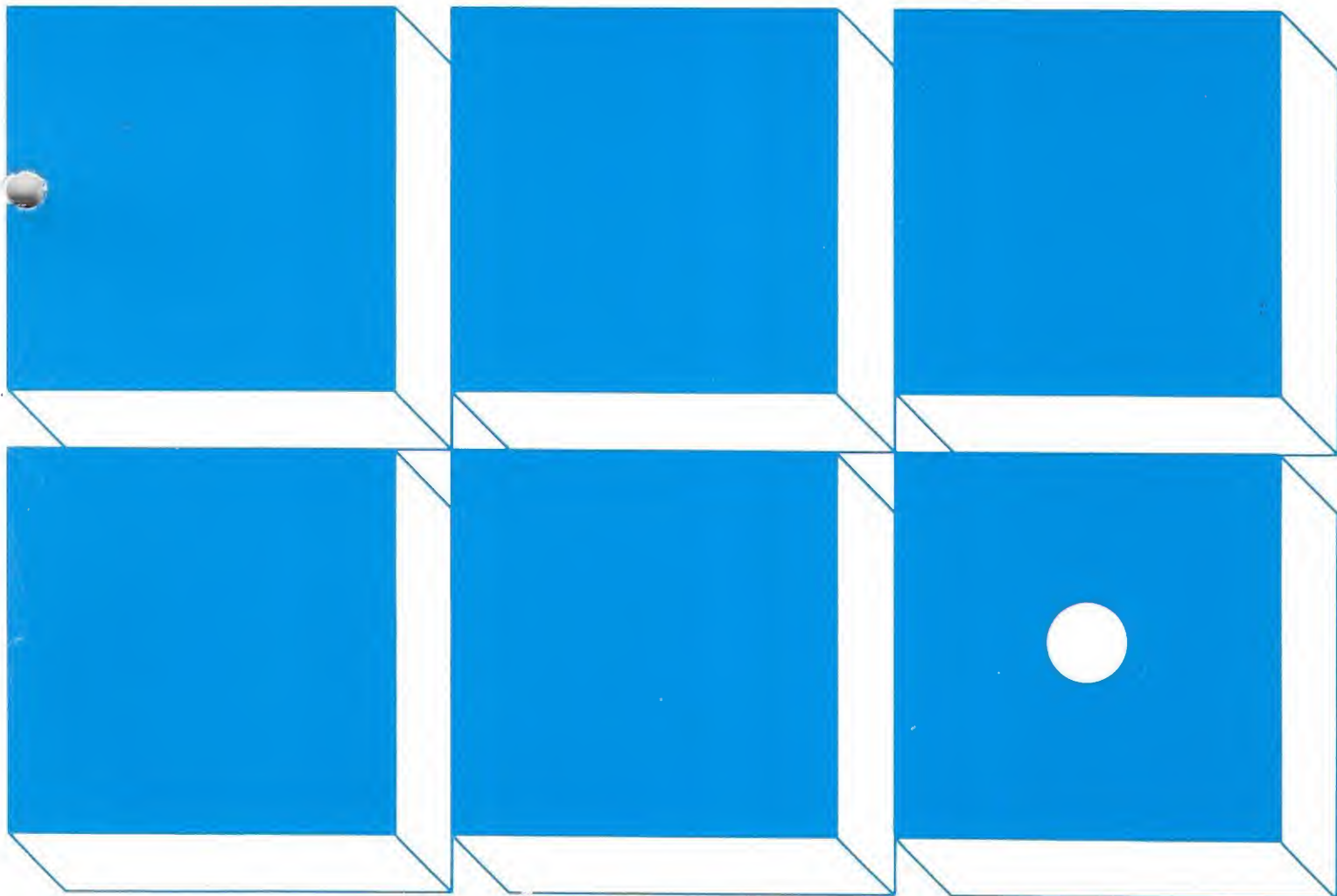
REVIEW





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block VI Mathematical Structures
Unit 1

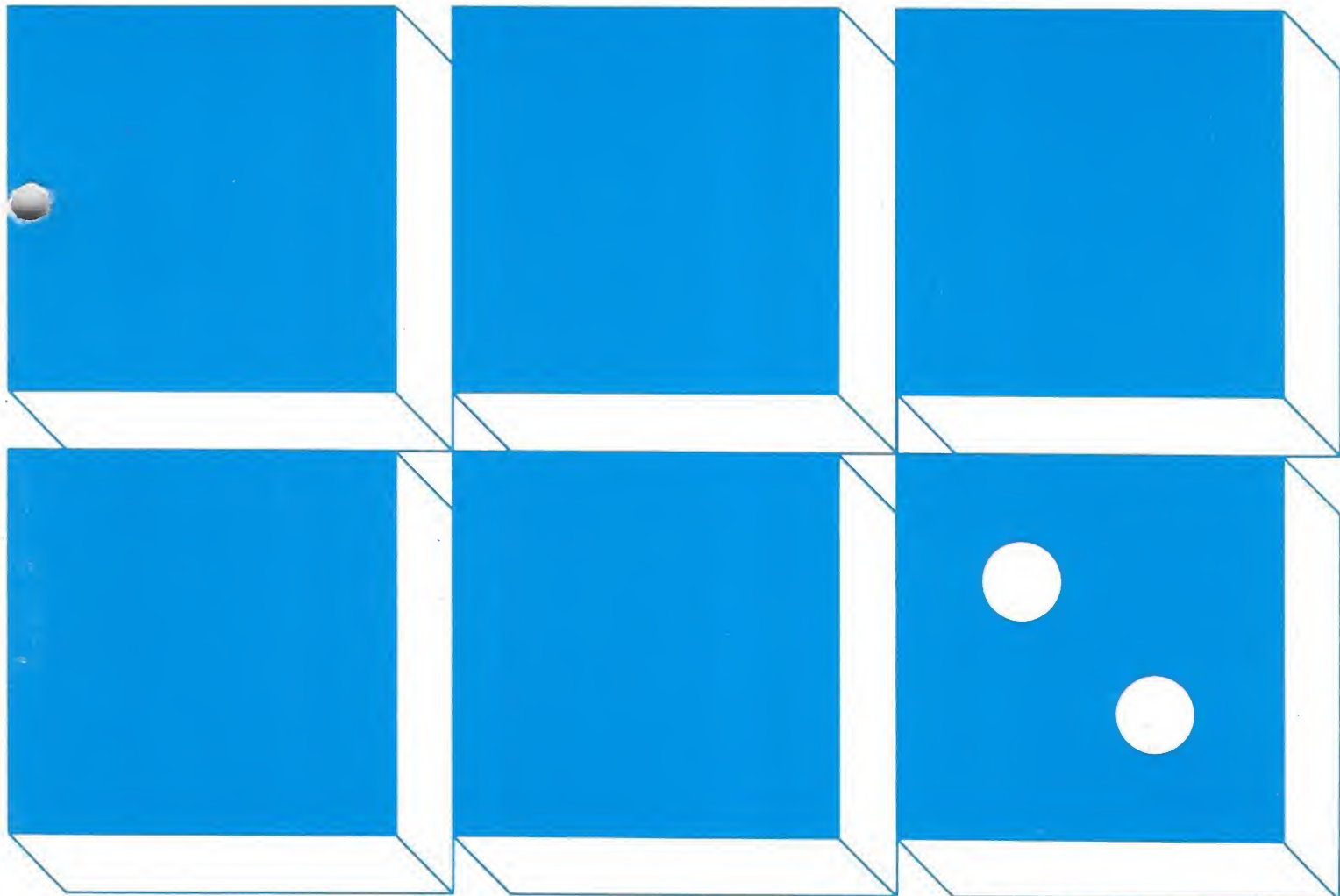
COMPLEX NUMBERS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block VI Mathematical Structures
Unit 2

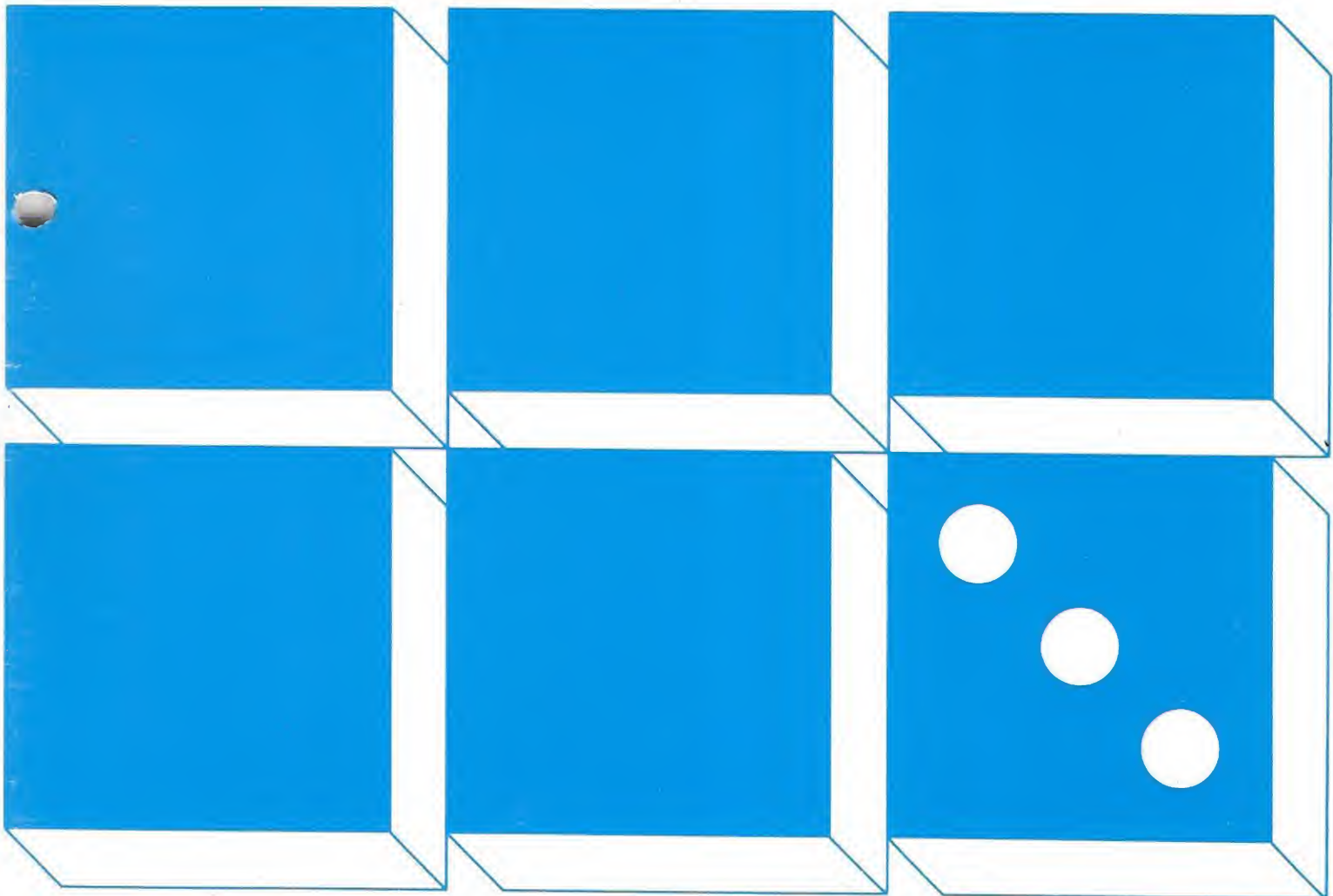
GROUPS





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block VI Mathematical Structures
Unit 3

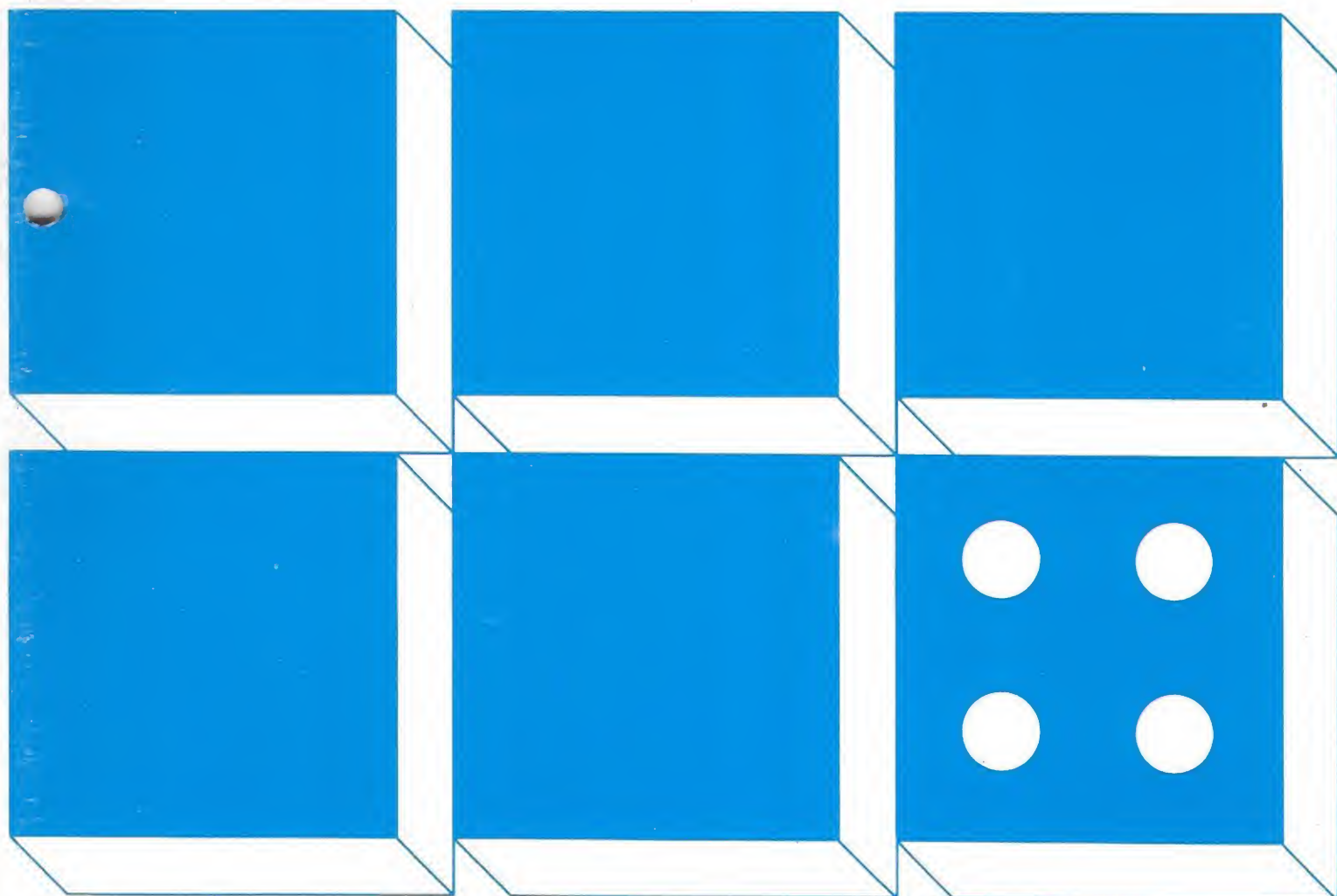
PROOF





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block VI Mathematical Structures
Unit 4

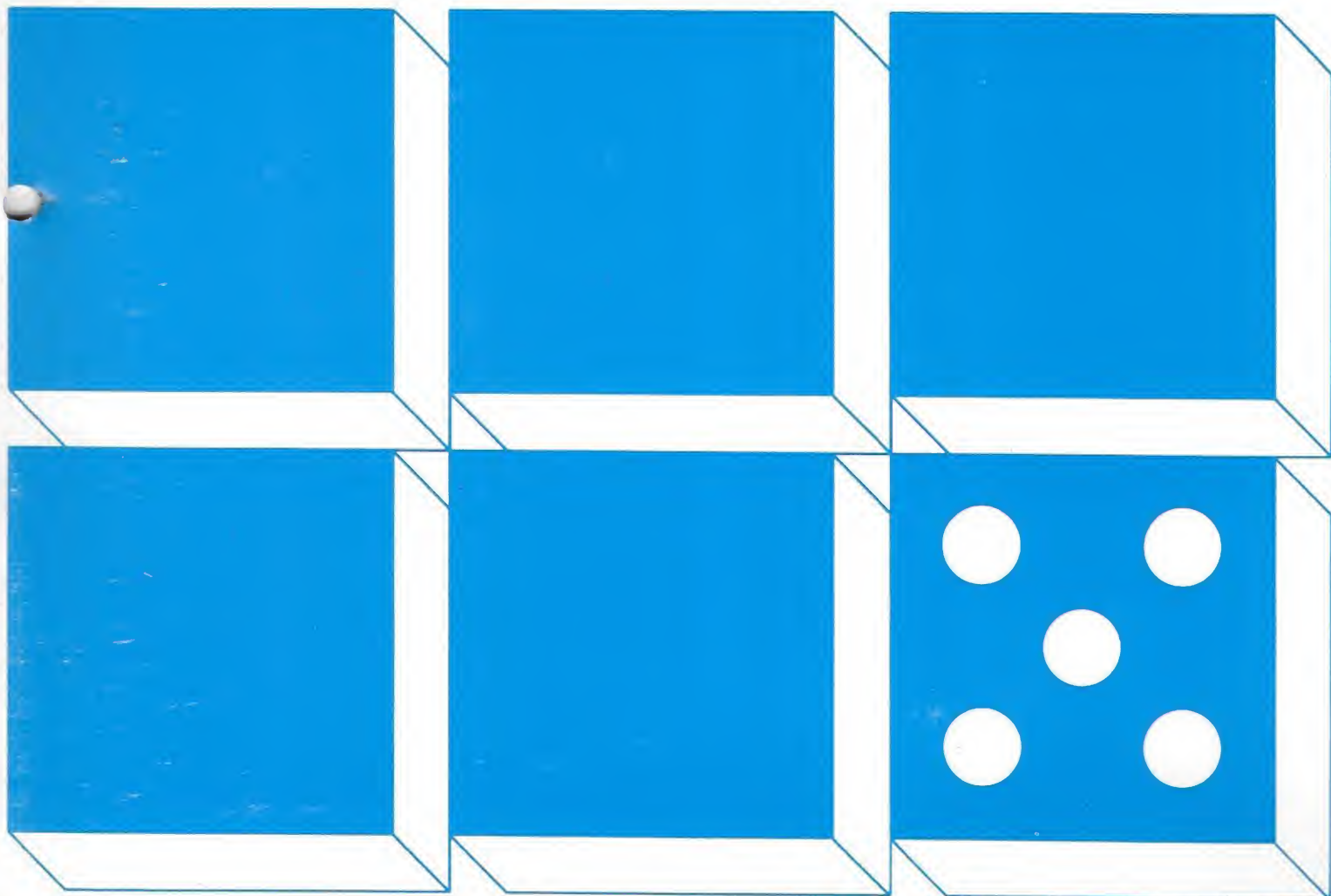
CLASSIFICATION





THE OPEN UNIVERSITY
Mathematics Foundation Course
Block VI Mathematical Structures
Unit 5

REVIEW



countdown to mathematics

Lynne Graham & David Sargent
of the Open University

Volume 1

12

34

5

6

7

8

1

0

9

Countdown to Mathematics

Lynne Graham and David Sargent, Faculty of Mathematics, The Open University.

Countdown to Mathematics has been written primarily for students who intend to take an Open University course which involves the use of some elementary mathematics. As such, its purpose is to help the home-based student revise and practise basic skills in arithmetic, algebra, geometry, graphs, and trigonometry. Although it arises from the needs of Open University courses and is designed for self-study, the core material it contains will also be valuable in classroom-based school and college courses of a similar mathematical level.

Countdown to Mathematics features the use of the pocket calculator as an integral teaching aid; it is used to explore mathematical properties as well as speed up calculations.

There is a wide spectrum of course needs, ranging from the basic numeracy assumed in many social science courses to the very specific skills required for mathematics and science courses. Consequently, the nine teaching modules in Countdown to Mathematics have been split into two separate books.

VOLUME 1 consists of Modules 1–4 and concentrates on the basic mathematical skills assumed in social science courses. It deals with arithmetic, simple algebra, how to plot and read graphs, and the representation of data. Where possible, the techniques are illustrated with real-world applications.

VOLUME 2 consists of Modules 5–9 and is intended for mathematics students. The emphasis here is on the manipulative skills which are necessary prerequisites for most mathematics courses beyond GCSE standard.

Addison-Wesley Publishers Ltd

Vol 1 0 201 13730 5

GCE



countdown to mathematics

Lynne Graham & David Sargent

Volume 2

of the Open University



12

34

5

6

7

8

109

Countdown to Mathematics

Lynne Graham and David Sargent, Faculty of Mathematics, The Open University.

Countdown to Mathematics has been written primarily for students who intend to take an Open University course which involves the use of some elementary mathematics. As such, its purpose is to help the home-based student revise and practise basic skills in arithmetic, algebra, geometry, graphs, and trigonometry. Although it arises from the needs of Open University courses and is designed for self-study, the core material it contains will also be valuable in classroom-based school and college courses of a similar mathematical level.

Countdown to Mathematics features the use of the pocket calculator as an integral teaching aid; it is used to explore mathematical properties as well as speed up calculations.

There is a wide spectrum of course needs, ranging from the basic numeracy assumed in many social science courses to the very specific skills required for mathematics and science courses. Consequently, the nine teaching modules in Countdown to Mathematics have been split into two separate books.

VOLUME 1 consists of Modules 1–4 and concentrates on the basic mathematical skills assumed in social science courses. It deals with arithmetic, simple algebra, how to plot and read graphs, and the representation of data. Where possible, the techniques are illustrated with real-world applications.

VOLUME 2 consists of Modules 5–9 and is intended for mathematics students. The emphasis here is on the manipulative skills which are necessary prerequisites for most mathematics courses beyond GCE Ordinary Level standard.

Addison-Wesley Publishers Ltd

Vol 2 0 201 13731 3





The Open University

MST121
Using Mathematics

Computer Book A



Mathematics and Modelling





The Open University

MST121
Using Mathematics



Computer Book B

Discrete Modelling





The Open University

MST121
Using Mathematics

Computer Book C



Continuous Models





The Open University

MST121
Using Mathematics



Computer Book D

Modelling Uncertainty





The Open University

MST121
Using Mathematics

Revision Pack



The Open University

MST121
Using Mathematics



Chapter A0

Starting points





The Open University

MST121
Using Mathematics

Chapter A1



Sequences





The Open University

MST121
Using Mathematics

Chapter A2



Lines and circles





The Open University

MST121
Using Mathematics



Chapter A3

Functions





The Open University

MST121
Using Mathematics



Chapter B1

Modelling with sequences





The Open University

MST121
Using Mathematics

Chapter B2



Modelling with matrices





The Open University

MST121
Using Mathematics

Chapter B3



Modelling with vectors





The Open University

MST121
Using Mathematics



Chapter C1

Differentiation and modelling





The Open University

MST121
Using Mathematics



Chapter C2

Integration and modelling





The Open University

MST121
Using Mathematics

Chapter C3



Differential equations and modelling





The Open University

MST121
Using Mathematics

Chapter D1



Chance





The Open University

MST121
Using Mathematics

Chapter D2



Modelling variation





The Open University

MST121
Using Mathematics

Chapter D3



Estimating





The Open University

MST121
Using Mathematics

Chapter D4



Further investigations





The Open University

MU120
Open Mathematics

Preparatory Resource Book A

Modules 1–4



The Open University

MU120
Open Mathematics

Preparatory Resource Book B

Modules 5–7



The Open University

MU120
Open Mathematics

Resource Book A

Units 1–5



The Open University

MU120
Open Mathematics

Resource Book B

Units 6–9



The Open University

MU120
Open Mathematics

Resource Book C

Units 10–13



The Open University

MU120
Open Mathematics

Resource Book D

Units 14–16



The Open University

MU120
Open Mathematics

Unit 0



Preparing for Open Mathematics



The Open University

MU120
Open Mathematics

Unit 1



Mathematics everywhere



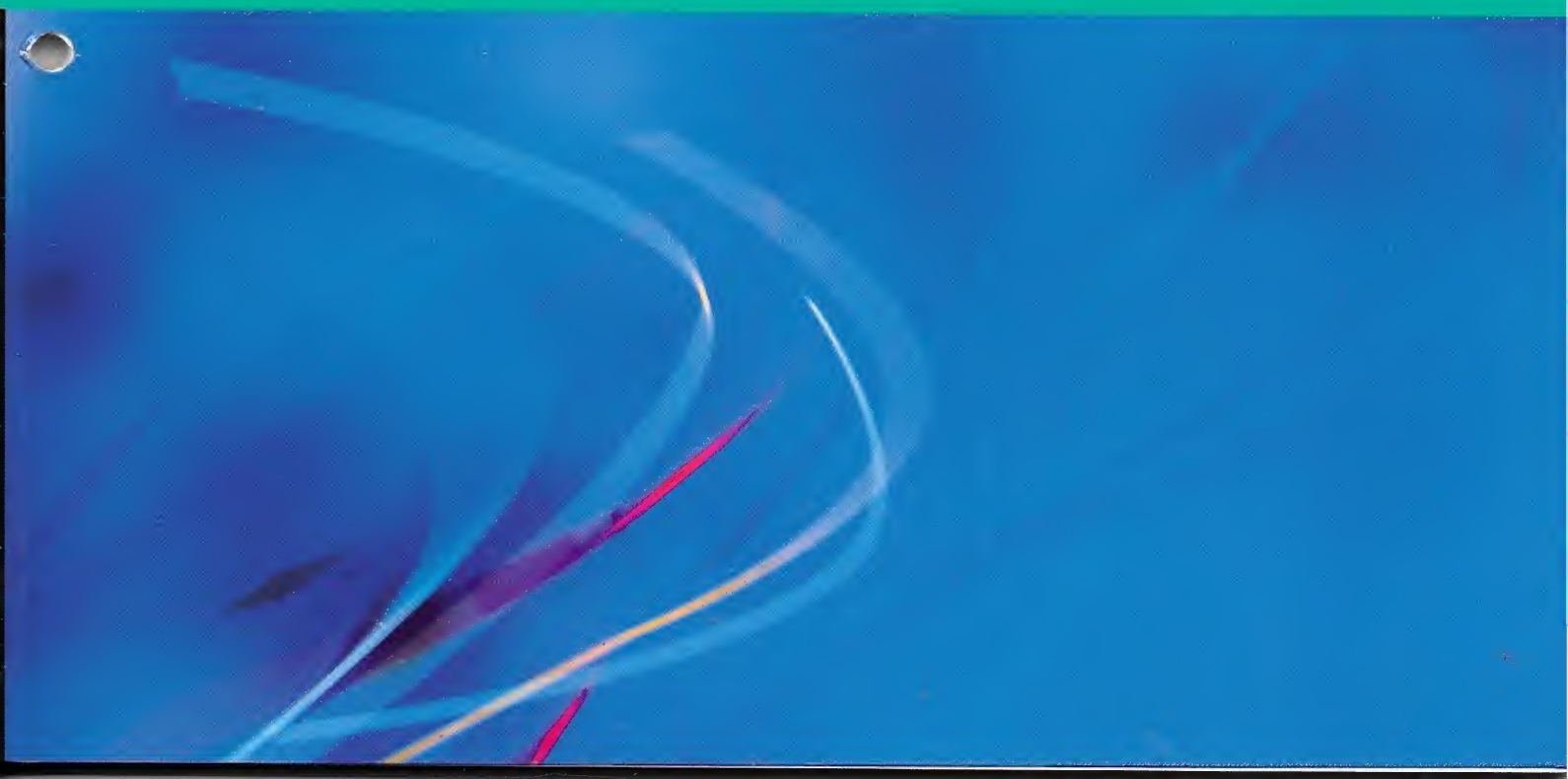
The Open University

MU120
Open Mathematics

Unit 2



Prices





The Open University

MU120
Open Mathematics



Unit 3

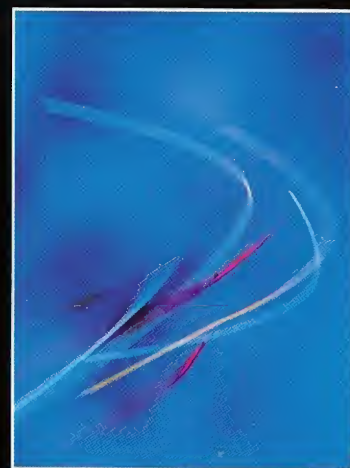
Earnings



The Open University

MU120
Open Mathematics

Unit 4



Health





The Open University

MU120
Open Mathematics

Unit 5



Seabirds





The Open University

MU120
Open Mathematics

Unit 6



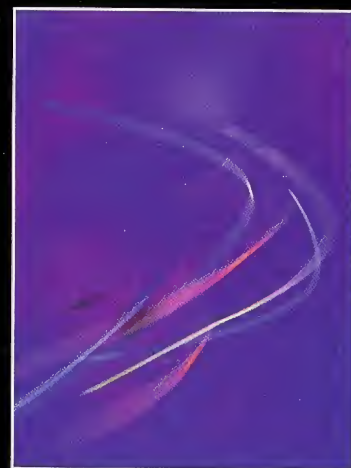
Maps



The Open University

MU120
Open Mathematics

Unit 7



Graphs

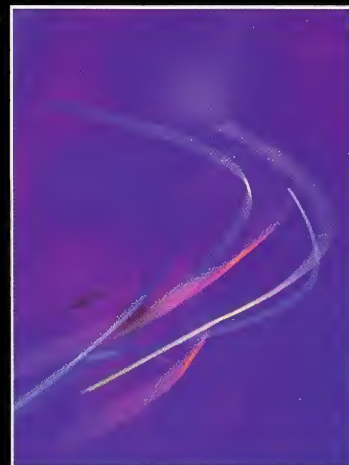




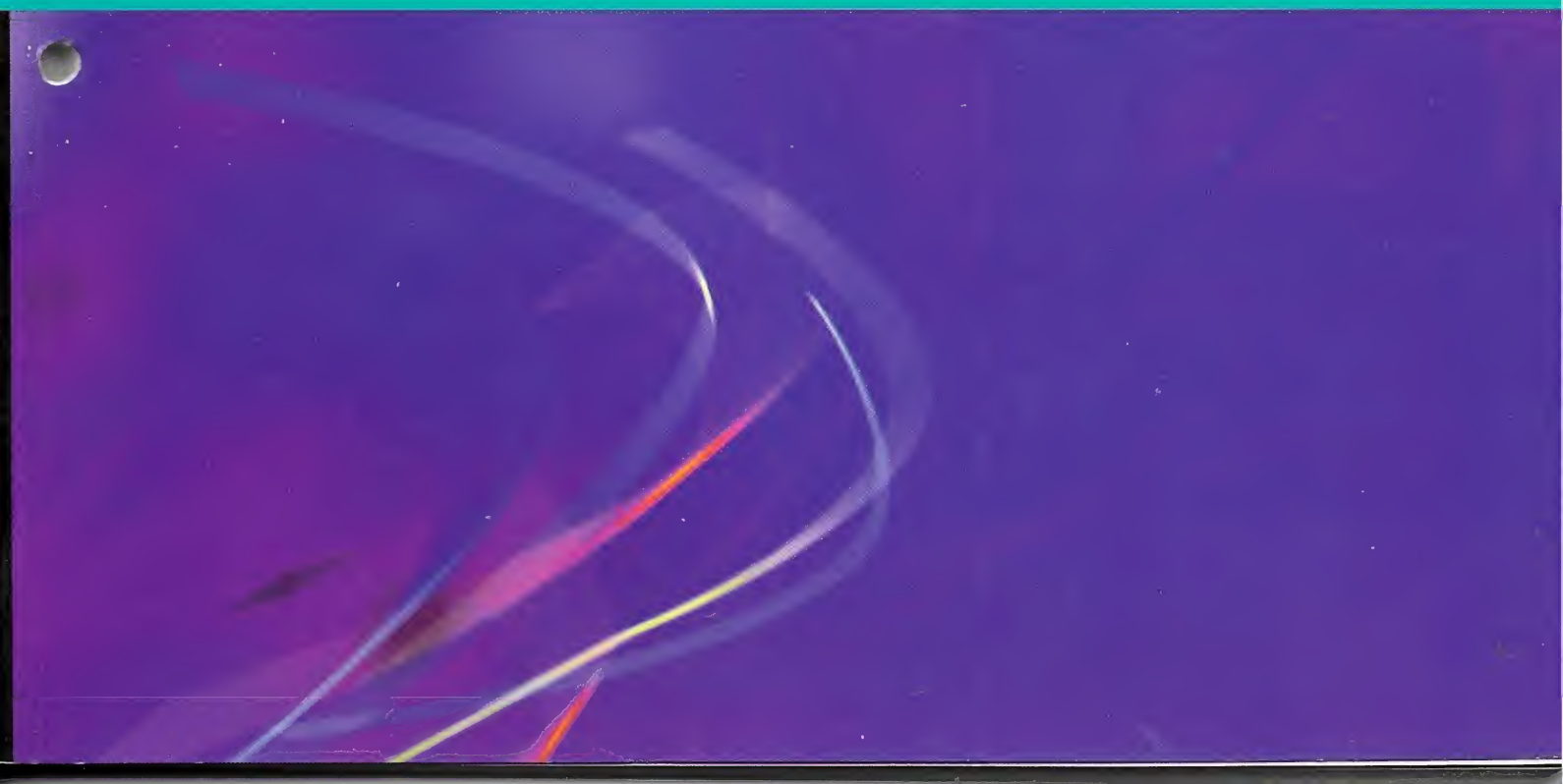
The Open University

MU120
Open Mathematics

Unit 8



Symbols

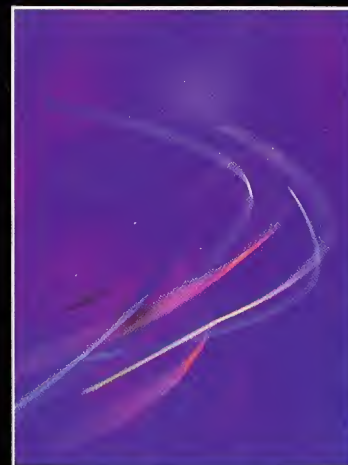




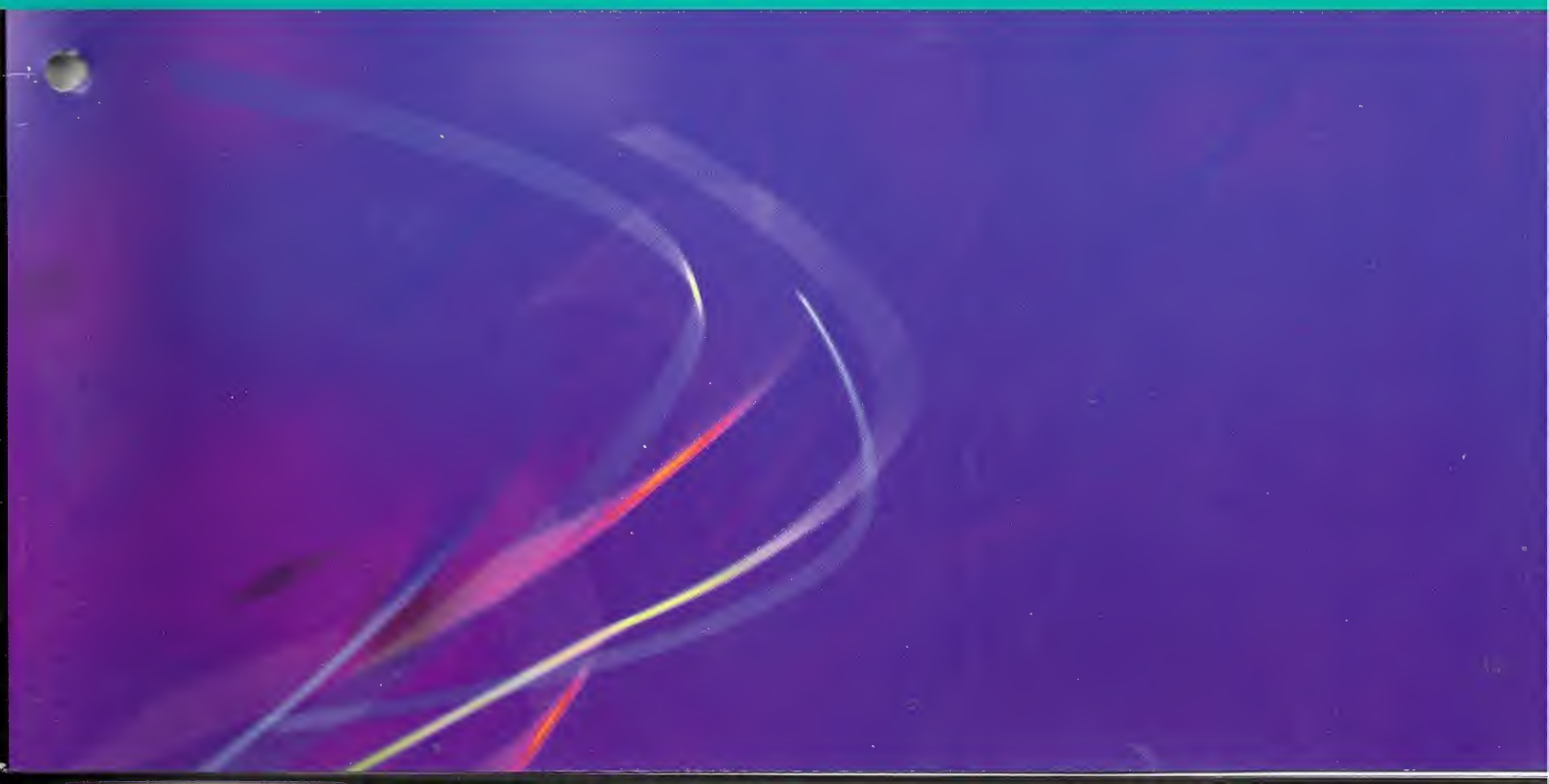
The Open University

MU120
Open Mathematics

Unit 9



Music





The Open University

MU120
Open Mathematics

Unit 10



Prediction





The Open University

MU120
Open Mathematics

Unit 11



Movement





The Open University

MU120
Open Mathematics

Unit 12



Growth and decay





The Open University

MU120
Open Mathematics

Unit 13



Baker's dozen





The Open University

MU120
Open Mathematics

Unit 14



Space and shape





The Open University

MU120
Open Mathematics

Unit 15



Repeating patterns





The Open University

MU120
Open Mathematics

Unit 16



Rainbow's end





The Open
University

MU123

Discovering mathematics

BOOK A





The Open
University

MU123

Discovering mathematics

BOOK B



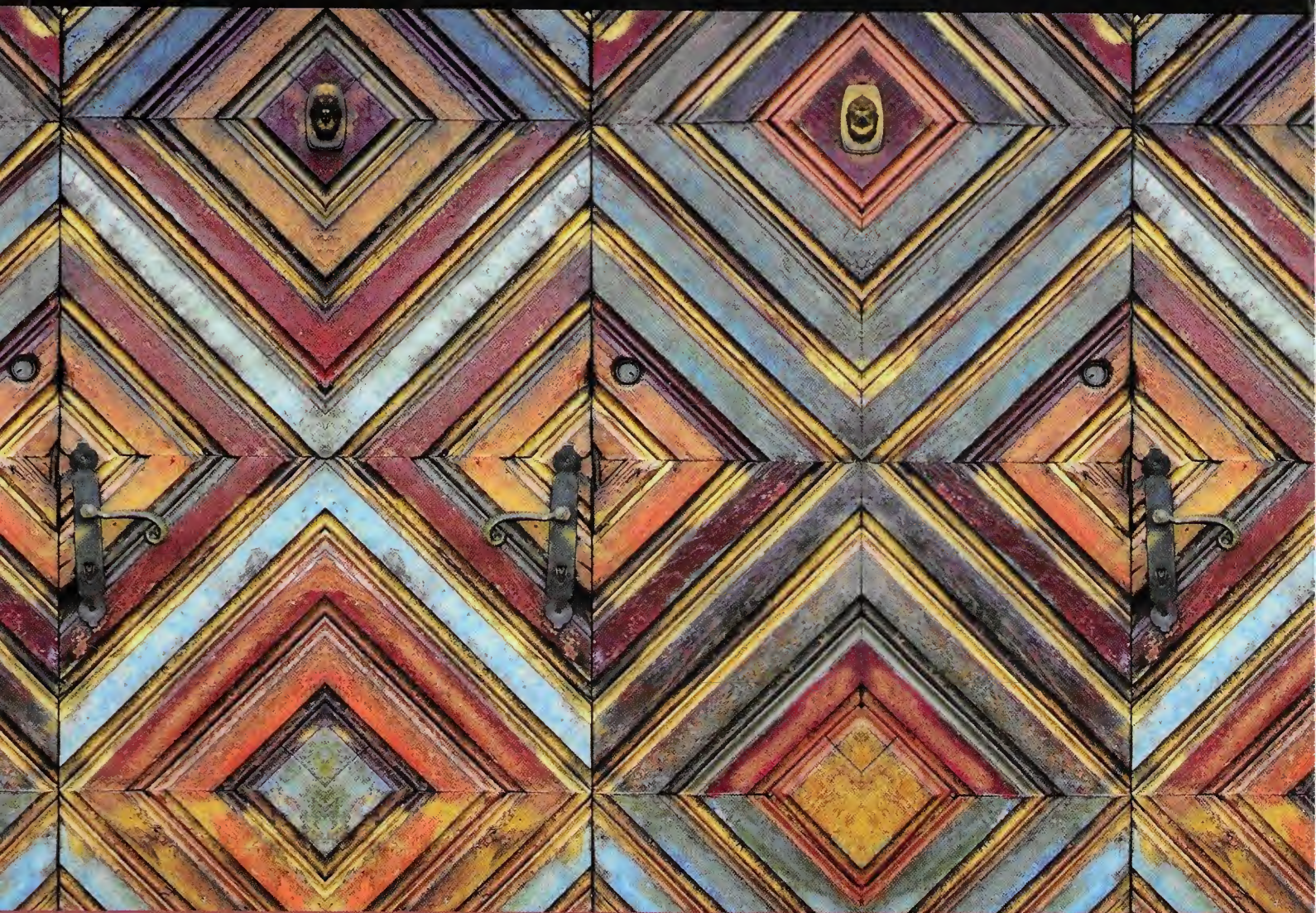


The Open
University

MU123

Discovering mathematics

BOOK C





The Open
University

MU123

Discovering mathematics

BOOK D





The Open
University

MU123

Discovering mathematics

COURSE GUIDE





The Open
University

MU123

Discovering mathematics

HANDBOOK

